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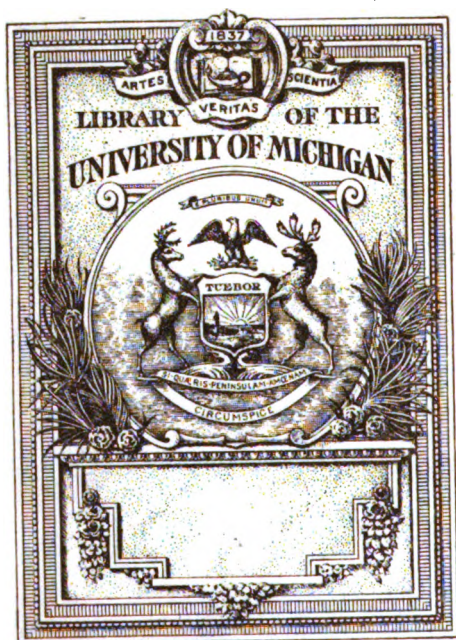
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**AMERICAN AND FOREIGN
INVESTMENT BONDS**

AMERICAN AND FOREIGN INVESTMENT BONDS



BY

WILLIAM L. RAYMOND
=



BOSTON AND NEW YORK
HOUGHTON MIFFLIN COMPANY
The Riverside Press Cambridge
1916

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PREFACE

THIS book has been put together from talks given to the writer's salesmen. The aim has been to discuss clearly and simply the leading classes of investment bonds.

In trying to carry out this aim, the writer has confined himself mostly to a discussion of the factors entering into the intrinsic value of such securities. The material available is vast, complicated, and always changing. At the same time the broad principles which govern the safety of investment bonds are simple and, like the laws of nature, forever the same.

From the point of view of the intrinsic value of American securities, the Great War in Europe has brought into high relief the resources and development of the United States. With the opening of the Panama Canal, the creation of an adequate merchant marine, and the establishment of a new banking system, this country should be placed in a position with relation to the business and finance of the world which it never has held before. Furthermore, the United States may become the market for a considerable amount of foreign government securities. It is to-day, of course, the principal market for the bonds of its own States, municipalities, and corporations.

It is hoped that this book may suggest some points of view of interest even to seasoned investors.

The writer wishes to thank Mr. Francis G. Goodale, who has done a large part of the legal work—especially in Chapters III, IV, V, and VI. The writer wishes also to thank friends who have read the manuscript.

W. L. R.

October 23, 1915.

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CONTENTS

INTRODUCTION	ix
I. THE FIELD OF INVESTMENT	i
II. UNITED STATES AND FOREIGN GOVERNMENT BONDS	5
III. STATE BONDS	94
IV. COUNTY, MUNICIPAL, AND DISTRICT BONDS	140
V. STEAM-RAILROAD BONDS	162
VI. PUBLIC-SERVICE CORPORATION BONDS	198
VII. INDUSTRIAL BONDS	251
CONCLUSION	295
APPENDIX	297
INDEX	311

INTRODUCTION

INVESTMENT in bonds is a comparatively modern development. It has arisen out of the needs of governments and corporations to finance themselves on a scale larger than that possible from annual taxes or annual earnings. Its development has been connected with the development of banking.

Investment in bonds is a comparatively modern development

The banking business, in some form or other, has been carried on practically continuously from a period six hundred years before the Christian era in Babylon¹ down through the periods of Athenian² and Roman³ domination of the civilized world, and again through the periods of the rise and development of the Venetian and Florentine States, and the growth and commercial expansion of such countries as modern England, France, Germany, and the United States.

The banking business has been carried on from ancient to modern times

As early as the twelfth century, the Republic of Venice obtained forced loans from its people. The State paid interest on these loans, but deferred payment of the principal to a time "when the situation of affairs should permit it."⁴ Later Venice obtained from its citizens loans secured by the revenue from salt and by the income of the treasury for a certain number of years.⁵ Florence borrowed of its bankers and pledged as security certain taxes and other revenues.⁶

Early government loans

Government borrowing, by the issue of bonds or other evidences of debt, assumed a more or less regular form in France in the time of Francis I⁷ (1515-47), in England with the Revolution of 1688 and the Wars

Government borrowing in France, England and the United States

¹ *The Bankers' Magazine*, London, August, 1877, pp. 720-21.

² Macleod, *The Theory and Practice of Banking* (London, 1892), vol. I, p. 171.

³ *Ibid.*, p. 161.

⁴ Daru, *Histoire de la République de Venise* (Paris, 1853), tome I, pp. 146-47.

⁵ *Ibid.*, p. 147.

⁶ Perrens, *Histoire de Florence* (Paris, 1877), tome III, pp. 261-62.

⁷ Vülherer, *Histoire de la Dette Publique en France* (Paris, 1886), tome I, p. 2.

of William III,¹ and in what is now the United States during the Revolutionary War.²

In the early part of the nineteenth century, we find in France small amounts of local loans or debts of the communes³ and in the United States borrowing on a considerable scale by our States and to a less extent by our cities.

In the United States, the bond business before and during the Civil War was concerned principally with United States government, state, and to a less extent municipal bonds.

After that period, bankers became interested in financing the building of many of our railroads and

during the past thirty years in furnishing money for the building and development of gas, street-railway, electric-light, and telephone properties. The financing of industrial concerns through the issue of bonds is a development principally of the past twelve or fifteen years.

In the following pages, we will concern ourselves less with the history of borrowing than with the principles governing at present the intrinsic values of leading classes of bonds.

¹ Macleod, vol. I, pp. 441-48.

² *Tenth Census*, vol. VII, pp. 299-301.

³ Hirst, *The Credit of Nations* (Washington, 1910), p. 96.

**AMERICAN AND FOREIGN
INVESTMENT BONDS**

AMERICAN AND FOREIGN INVESTMENT BONDS

CHAPTER I

THE FIELD OF INVESTMENT

THE investment of funds so as to have the principal safe and at the same time obtain a reasonable income is an extremely difficult matter. The field is so large, the possibilities of mistake so numerous, that more than ordinary skill and knowledge are required.

The investment of funds is difficult

As a general rule, funds should be invested when received. If investment is made when market prices are low as well as when they are high, an average price will be paid and none of the funds will be left without receiving some income.

Funds should be invested when received

Funds may be placed in any one or more of the following principal channels of investment: —

- (1) Real estate and real-estate mortgages;
- (2) Bonds;
- (3) Stocks;
- (4) Collateral loans, commercial paper, and ordinary notes of firms and individuals.

Leading channels of investment

About collateral loans, commercial paper, and ordinary notes, we will say only a few words. This class of paper belongs not so much to the subject of investment as to the subject of ordinary banking or loaning money for short periods.

Short-term paper

The other three principal kinds of investment — that is, in real estate and real-estate mortgages, in bonds and in stocks — may be said to furnish the ordinary field for investment.

The three principal mediums of investment

The principal advantage that real estate has over other mediums

2 AMERICAN AND FOREIGN INVESTMENT BONDS

of investment is its tangibility. The great disadvantage which real estate has is that it is difficult to sell quickly. Another disadvantage is that the income is liable to be uncertain and at times may cease altogether.

Advantages and disadvantages of real estate

Real-estate mortgages are somewhat different. These run ordinarily from one to five years, — perhaps most commonly three years, — are tax exempt in many States, and are written usually for about sixty per cent of the assessed value of the property. Such mortgages, when given by responsible persons and after proper examinations, ought to be reasonably safe mediums for investment. Even with mortgages that are finally paid off, however, the payment of the interest often is irregular.

Real-estate mortgages

There remain to be spoken of in this very general survey of the field of investment only bonds and stocks. For convenience, we will speak of stocks first.

Bonds and stocks

In a general way, stocks stand for the ownership of the business and the right to receive the net profits, whereas real-estate mortgages or bonds stand for the prior claim on the property and the right to obtain a stipulated amount in interest before anything is paid in dividends to stockholders. Stocks always are junior to bonds and notes of the same corporation. Often they represent to a large extent merely capitalization of earning capacity. There is no promise to pay a definite sum of money and no promise, as a rule, even to pay any income. The stocks of any corporation have, in this respect, merely the right to participate in earnings above operating expenses and fixed charges, when, as, and if earned by the corporation and ordered distributed by the board of directors.

Nature of stocks

Many corporations have two classes of stock, preferred and common. Preferred stock usually is entitled to a certain dividend before anything is paid on the common. Sometimes this dividend is cumulative — that is, unless paid regularly, it becomes an accumulated charge against earnings. Many preferred stocks are preferred not only as to dividends, but as to assets in case of liquidation.

Classes of stocks

The remaining important form of investment — investment in bonds — is the subject of this book.

Investment in bonds the subject of this book

The first thing to notice about bonds is that they represent, as a rule, a promise to pay a definite sum of money at a given time, with, usually, a regular rate of interest.

Bonds imply a definite promise

The principal large classes of investment bonds are as follows:—

- (1) Government bonds.
- (2) State bonds.
- (3) County, municipal, and district bonds.
- (4) Steam-railroad bonds.
- (5) Public-service corporation bonds, or bonds of corporations supplying water, gas, electric light and power, street-railway, or telephone service.
- (6) Industrial bonds or bonds of manufacturing and mercantile concerns.¹

Principal classes of investment bonds

It may be well here to speak of what may be called the framework of bond investment. If we think of the bonds of the leading civilized nations of the world; then of the bonds of our States and of our leading cities; then of the bonds of the principal trunk-line railroads connecting those cities; and then of the bonds of the street-railway, gas, electric-light and power, and telephone companies serving those cities; and then, if we add to those securities the bonds of the great industrial concerns, we have the framework around which is built practically the entire structure of bond investment.

The framework of bond investment

We cannot say that any one class of bonds is always and without exception safer than another class, any more than we can say that bonds are always safer than stocks or always safer than real estate. Each individual bond issue must be judged on its own merits, yet with due reference to the whole structure of investment, just as each case in common

One class of bonds not always safer than another

¹ In view of the fact that we do not discuss in this book the methods of dealing in or marketing bonds, we will say here that the two great markets in the United States for all kinds of bonds are the New York Stock Exchange and private bankers or bond dealers. Of the two markets, the latter is far and away the larger. The great bulk of the state, municipal, and public-service corporation bonds is marketed by private bankers. Original issues of steam-railroad and industrial bonds usually are sold first to clients by private bankers. The New York Stock Exchange may be said to be the great secondary market for railroad bonds and such other bonds as are listed there. All the other stock exchanges in the country, including the Boston, Philadelphia, and Chicago Exchanges, deal to a greater or less degree in bonds.

4 AMERICAN AND FOREIGN INVESTMENT BONDS

law must be judged on its own merits taken in connection with the previously existing body of law.

Will discuss safety of various kinds of bonds In the following pages, we will take up in a general way the features bearing on the safety of these various kinds of bonds.

CHAPTER II

UNITED STATES AND FOREIGN GOVERNMENT BONDS

GOVERNMENT bonds either are simply promises to pay or acknowledgments of indebtedness, or else are promises to pay and have some special security. In Europe, government bonds often are referred to as "stocks."

General description of government bonds

The government bonds of most of the so-called great powers, notably the United States, Great Britain, France, and Germany, are simply promises to pay or acknowledgments of indebtedness. In many cases these obligations have no maturity, — as British consols, French 3% rentes, and German Imperial 3% bonds, — although often

Bonds of the United States, Great Britain, France, and Germany

reducible by purchase, as are all old German Imperial bonds, by drawings, as are French 3% redeemable rentes,¹ or by redemption at the option of the Government, as are British consols and German Imperial bonds.² Government bonds of the class described above are payable, as a rule, out of the ordinary revenues and resources of the Government, whether such revenues are derived from customs duties, excise taxes, income taxes, or from any other available resources.

In the cases of certain nations that do not have high credit, there are often special provisions to secure the payment of interest and principal of their government bonds: for instance, in the case of the Japanese Government 4½% sterling loan, put out at the time of the war with Russia, the bonds are secured by a charge on the annual net revenues of the Imperial Japanese Government Tobacco Monopoly;³ in the case of the Argentine Republic Port of Buenos Aires 5% debentures, the bonds, besides being a direct obligation of the Argentine Government, are secured by a charge on the harbor works and their revenues and on other property;⁴ in the case of

Government bonds sometimes have special security

¹ *The Stock Exchange Official Intelligence for 1914* (London), p. 109.

² *Ibid.*, pp. 3 and 109.

³ *Ibid.*, p. 113.

⁴ *Ibid.*, p. 96.

the Bulgarian Government 6% state mortgage loan of 1892, the bonds are secured by a first mortgage on certain state railways and on the harbors of Varna and Burgas, together with the present and future revenues and dues of those harbors;¹ in the case of the Mexican 5% external consolidated gold loan of 1899, the bonds are secured by special hypothecation of 62% of the import and export duties of the United States of Mexico;² in the case of the Greek Government 4% loan of 1902, the bonds are secured by a prior lien on the surplus receipts from certain assigned revenues,³ by the surtax on tobacco deposited at the National Bank, and by a first lien on certain railroad property and the share in its net earnings accruing to the Government.⁴

Broadly speaking, however, government bonds are to be thought of as representing simply the good faith and ability to pay of the governments or nations issuing the bonds. There is no known method of collecting, against the will of the nation indebted, a government bond issue or the interest on it, except force. In the words of Professor Bastable, it rests with the Government "within its own discretion to say whether or not it will meet its obligations." Again, he says, "An Act of Parliament repudiating the national debt would be quite as valid as any other measure."⁵ Against a sovereign state, the only remedy is what has been called "collection by warship."

Furthermore, a nation can borrow for any purpose that it sees fit — from a strictly productive purpose, like construction of railways, to a highly unproductive and wasteful purpose such as war. It can and often does borrow even to meet deficiencies in the revenue in times of peace — in other words, it can borrow to meet running expenses. Such a use of the borrowing power is far from desirable, but sometimes it is necessary. There is no authority that can place restrictions on the purpose of borrowing or curb in any way a sovereign state or nation.

No legal remedy against defaulting nations

Nation can borrow for any purpose

¹ *The Stock Exchange Official Intelligence for 1914* (London), p. 100.

² *Ibid.*, p. 114.

³ *Ibid.*, p. 109. Revenues from the monopolies on salt, petroleum, matches, playing-cards, cigarette paper, and Naxos emery, from tobacco dues, from certain stamp dues, and from import duties collected by the custom-house at the Piræus.

⁴ *Ibid.*, p. 110. ⁵ C. F. Bastable, *Public Finance* (2d ed., London, 1895), p. 611.

PRICES OF GOVERNMENT BONDS, JANUARY, 1913

<i>Issue</i>	<i>Price</i>	<i>Yield about (per cent)</i>	
United States Panama, ¹ 3%, due June 1, 1961.....	102½ and interest	2.92	This issue is not available to secure circulation of national banks. Exempt from all taxes national, state, and local.
British 2½%, consols, cash *..	75⅞ flat	3.33	Redeemable at option of Parliament on and after April 5, 1923, at par. Interest January 5, April 5, July 5, and October 5.
French 3% per- petual rentes *..	88½ flat	3.39	Interest January 1, April 1, July 1, and October 1.
Italian 3½% rentes ⁴	96 flat	3.65	Interest January 1 and July 1, exempt from all Italian taxes present and future.
German Imperial 3% *.....	77½ flat	3.91	Redeemable at option of German Empire, after notice to be fixed by law, at par. Interest April 1 and October 1.
Austrian gold 4% 1876 *.....	91½ flat	4.43	Interest April 1 and October 1.
Hungarian 4% gold rentes *....	87 flat	4.61	Redeemable at option of the Government at any time. Interest January 1 and July 1. Principal and interest exempt from all Hungarian taxes.
Russian 4%, Series II ⁷	90½ flat	4.45	Redeemable by drawings at par January 1 and July 1 for repayment April 1 and October 1 within 81 years from 1890. Interest January 1, April 1, July 1, and October 1. Exempt from all Russian taxes.
Russian 5%, 1906 ⁸	104 flat	4.84	Redeemable by annual drawings at par on and after February 1, 1917, for repayment on May 1 following. Must be repaid in full by May 1, 1956. Until May 1, 1916, loan cannot be converted or called for repayment. Interest May 1 and November 1. Exempt from all Russian taxes.
Japanese 4% sterling, 1910, ⁹ due June 1, 1970.....	82 flat	4.95	Redeemable at option of the Government, on six months notice, on or after June 1, 1920, at par. Interest June 1 and December 1. Interest exempt from Japanese Income Tax.
Japanese 4½% sterling, 1905 ⁹ (2d Series), due July 10, 1925...	94½ flat	5.36	Redeemable at option of the Government at any time, on six months notice, at par. Interest January 10 and July 10. Interest exempt from Japanese Income Tax.

¹ See *United States Treasury Department*, Circular 52, July 1, 1912 (Washington, 1913), p. 17.² *The Stock Exchange Official Intelligence for 1914* (London), p. 3.³ *Ibid.*, p. 109.⁴ *Ibid.*, p. 112.⁵ *Ibid.*, p. 97.⁶ *Ibid.*, p. 111.⁷ *Ibid.*, p. 118.⁸ *Ibid.*, p. 119.⁹ *Ibid.*, p. 113.

In view of this fact the question is, What is the real security, or what are the factors that go to make up the ability and willingness of a Government to pay the interest and principal of its bonds?

If we approach this question first from the point of view of what some of the leading government securities have been selling for,—or from what may be called the point of view of the credit of the leading nations,—we shall be able to discuss it more intelligently. The table on page 7 shows the prices and the approximate net income basis ¹ on which certain leading government bond issues sold in January, 1913.² We have chosen this date because it corresponds most closely with the date of reliable information available in regard to the nations issuing the bonds. These prices, as compared with those of 1912, evidently show to a considerable extent the effect of the events leading up to the Balkan Wars and of the outbreak of those wars in the preceding autumn.

The income basis on which the above government bonds sell reflects in a general way the credit of the nation issuing the obligations. As may be seen from the table, United States Government bonds sell to yield a smaller income, or, in other words, sell at a higher price than the bonds of any other of the leading civilized nations. British consols rank next, then French rentes, then Italian rentes, and so on in the order of the list. What are the reasons for these differences in price? In other words, why is the credit of the United States or of Great Britain, for instance, higher than that of Austria or Japan?

Before going any further it may be well to inquire who and what are the people responsible for these obligations. What is their origin? What briefly is their history? What kind of people are they? What is their place in the world?

¹ In the cases of issues having definite maturities, net income is determined by use of the usual bond tables; in the cases of issues without definite maturity, net income is determined by dividing the per-cent interest which the bonds pay by the per-cent selling price. Flat quotations, or quotations including accrued interest, are reduced, in figuring the yield, to an "and interest" basis. Quotations of all bonds except United States Government bonds are in per-cent sterling.

² Prices of January 3, 1913. Price of United States bonds from *Commercial and Financial Chronicle* (New York), vol. 96, p. 50. Prices of foreign government bonds from the *Statist* (London), vol. 75, pp. 5 and 59.

Some of the nations issuing these obligations have their beginnings in a remote past. All are peopled to a greater or less degree by a mixture of races, and all have occupied territory with boundaries intermittently changing. In a general way, with the exception of Japan and to a less extent of Russia, all the great modern nations — the United States, Great Britain, France, Germany, Austria-Hungary, and Italy — come from a mixture in varying degrees of the Germanic or Baltic tribes which overran the Roman Empire — 375 to 476 A.D. — with the Latin races of the Empire. The Slavs or Wends, who at an early date appeared to be settled northeast of the Carpathians in the basins of the Vistula, Pripet, and upper Dniester, were closely related in stock to the ancestors of the Baltic tribes, Prussians, Lithuanians, and Letts. The Roman historian Pliny speaks of Slavs along the Vistula and the Venedic Gulf — probably the Gulf of Danzig. The Goths and Huns at one time were the conquerors of the Slavs. The Eastern Slavs became the Russian people. They attacked the Empire on the lower Danube and reached the Don and the Volga.¹ Later there took place an amalgamation or absorption by the Slav race of a variety of Ural-Altaic stocks, Turko-Tatars, Turko-Mongols, and various Caucasian races.² The origin of the Japanese is uncertain. The aborigines were called Ainu — suggesting a close affinity with Europeans. The bulk of the population to-day, however, seems to be derived from a mixture of the Malay, Mongolian, and Manchu-Korean types — with the Malay element predominant. In the course of many centuries, practically complete amalgamation has taken place.³ Apparently the islands were invaded from the mainland of Asia. The earliest date of what is believed in Japan to be authentic history is 660 B.C.⁴

The territorial and strategic position occupied by the so-called great powers to-day is the result of centuries of change, usually of countless wars, in all cases of generations of painful development. Even now in the Great European War Europe is being

¹ *Encyclopædia Britannica* (11th ed., 1911), vol. xxv, pp. 228-30.

² *Ibid.*, p. 873.

³ *Ibid.*, vol. xv, p. 165.

⁴ Carl Ploetz, *Epitome of Ancient, Medieval and Modern History* (12th ed., Boston), p. 33.

remade. Not only the territory, but the population, resources, power, and prestige of the great nations of the world are in the blast furnace. It has ever been so. This great war, to be sure, appears to be one of the colossal upheavals that occur only at long intervals; but civilization like nature never stands still. The scepter has passed from Egypt to Babylonia and Assyria, from Assyria to Persia, from Persia to Greece, from Greece to Rome; it has rested for a time with the Venetian and Florentine Republics; it has passed to Spain, to France, to England: it is passing now to the United States of America — or so it would seem. All that is certain is that the leadership of civilization and the relative rank of the nations of the world will not remain forever the same.

If we glance at the history of the leading nations of to-day, we shall be in a better position to understand their present status and credit. Everybody is familiar with the origin and development of the United States, and almost everybody has a good idea of English history from Roman times to the present. These are preëminently the nations which have developed the individualistic ideal and have evolved through patient struggle free institutions and constitutional government. They have based their institutions on the common law;¹ and they have fought steadily for liberty, self-sufficiency, and equality under the law.

Modern France is a product of many forces and of many conditions. After the great Frankish Empire of Charlemagne was divided through the Treaty of Verdun in 843 A.D., there developed Germany from the East Frankish portion and France from the West Frankish. The people of the East Frankish kingdom were predominantly of Germanic stock, those of the West Frankish were predominantly of Romance or Latin stock.² Gradually there arose in France the familiar struggle between the central authority or king and the great nobles. At first the nobles were too strong for the king, and the central authority developed late. This is

¹ See A. Lawrence Lowell, *The Governments of France, Italy and Germany* (Cambridge, 1914), p. 50, and note beginning on p. 65.

² Ploetz, p. 187.

one of the striking differences between French and English history.¹ The struggle in France ended, however, in the almost complete victory of the central authority under Louis XIV. In that reign, what Buckle² has called "the protective spirit" extended to every phase of government and even to every phase of intellectual activity. Individuality and the spirit of independence were dead. The seeming unity, strength, and prosperity of France under Louis XIV were seeming only. There followed, after a considerable delay, to be sure, the fierce but purifying flames of the French Revolution.³ Then from democracy, rampant, unreasoning, atheistical,⁴ there had to be evolved again, slowly and painfully, order and liberty under law. Centralization remained to a great degree, — perhaps greater than ever, — but it was a centralization deriving its authority from the people instead of from a hereditary king.⁵ Now we have a chance to read the latest chapter — the effort of republican France to regain something of the power and prestige among the nations of the world that it had before 1870 and to evolve a workable and stable system of parliamentary government.

From the death of Charlemagne (814 A.D.) to the crowning of William I of Prussia as German Emperor (1871), what is now Germany has been most of the time broken up into a large number of small kingdoms or states. The Holy Roman Empire — which endured not only as a name, but as an ideal for over a thousand years — under Charlemagne and under Otto I (936–73 A.D.) and his successors of the Hohenstaufen line was a great reality — a powerful united Empire.⁶ Modern Germany — or Germany under the leadership of Prussia — really derives from the old North mark, or the mark or

Outline of
German
history

¹ Lowell, p. 51.

² Henry Thomas Buckle, *History of Civilisation in England* (New York, 1858), vol. I, chap. XI.

³ *Ibid.*, chap. XII.

⁴ The reason why the French Revolution attacked religion — why it set up the "Goddess of Reason" — was that the prerevolutionary writers like Voltaire and Rousseau attacked the abuses of the clergy even before they attacked the abuses of the Government. Church and State were, moreover, closely intertwined. The clergy, as in England before the Great Rebellion, stood on the side of the conservative — the reactionary element. (Buckle, vol. I, chaps. XI and XII.)

⁵ Lowell, p. 35.

⁶ James Bryce, *The Holy Roman Empire* (New York, 1904), pp. 215–16, and 384.

boundary lying along both banks of the middle Elbe established by the Germans against the Wends or Slavs; just as Austria derives from the Bavarian Ostmark or East mark along the south bank of the Danube east of the river Ems, founded about 800 A.D.¹ In 1415, the German Emperor invested Frederick, Burgrave of Nuremburg, a Hohenzollern, with the mark Brandenburg — lying east and west of the Elbe in the district about the old North mark.² From that time until the formation of United Germany under William I, the only rulers who stand out conspicuously are: Frederic William, the Great Elector of Brandenburg, who wrested East Prussia from Poland³ and carried out various internal reforms; Frederic William I, who established a formidable army, left an overflowing treasury, and laid the foundation of the future power of Prussia;⁴ and Frederic II, the Great (1740-86), who added Silesia and Polish Prussia to his kingdom and revived the political and intellectual life of Germany under the leadership of Prussia.⁵ The successful war of Prussia and Austria against Denmark, by which the victors obtained Schleswig, Holstein, and Lauenburg (1864);⁶ the war of Prussia against Austria in 1866, by which Prussia obtained Schleswig-Holstein, Hanover, and other territory and established her supremacy over Austria in the leadership of Germany;⁷ and the Franco-Prussian War of 1870 resulted in the unification of Germany under the leadership of Prussia and the establishment of modern Germany as a great power.

Italy like Germany, since the fall of the Western Empire (476 A.D.), has been torn and pieced together again and again. Odo-
 vakar (Odoacer), leader of German tribes, after the
 fall of the Western Empire became ruler in Italy.⁸
 Later the Ostrogoths under Theodoric conquered
 Italy; and still later the Lombards conquered the country as far
 south as the Tiber.⁹ For a long period portions of Italy were

¹ *Encyclopædia Britannica* (1910), vol. III, p. 5, and vol. IV, p. 420. Ploetz, pp. 194-96. For map of the old marks, see F. W. Putzger's *Historischer Schul-Atlas* (Bielefeld und Leipzig, 1895), p. 15.

² Ploetz, p. 252, and Putzger, pp. 18-19.

³ Ploetz, p. 373, and Price Collier, *Germany and the Germans* (New York, 1914),

p. 31.

⁴ Ploetz, p. 397, and Collier, p. 33.

⁵ Collier, p. 36.

⁶ Ploetz, p. 506.

⁷ *Ibid.*, p. 510.

⁸ *Ibid.*, p. 173.

⁹ *Ibid.*, pp. 174-75.

included in the old German Empire. Modern Italy dates from the war of France and Sardinia against Austria (1859) and the liberation of Italy from Austria.¹ The outstanding figures of this period are Count Cavour and Victor Emmanuel. In 1861 practically all Italy, except Venice and the Papal territory, were united under one scepter.²

The thrones of Austria and Hungary — which latter country was inhabited as early as the ninth century A.D. by the Magyars, a nomadic Finnish tribe, which gradually had made its way from the Ural region toward Europe³ — were occupied by the same ruler, at intervals, as early as the fifteenth century. In 1687, the hereditary succession to the throne of Hungary was conferred on the male line of Austria; and by the Pragmatic Sanction was allowed to pass, in case of necessity, to the female line. In accordance with this settlement, Maria Theresa, archduchess of Austria, ruled also as Queen of Bohemia and Hungary from 1740 to 1780. Austria was the leader of the German Confederacy Austria-Hungary formed toward the close of the Napoleonic wars and later renewed or reestablished. On the abdication of his uncle in 1848, Francis Joseph I, the present Emperor, became Emperor of Austria. The Hungarian Diet refused to recognize his accession, and an uprising of the Magyars against the House of Hapsburg resulted in the practical independence of Hungary.⁴ The revolt finally was put down with the help of Russia. In 1867 the old constitution of Hungary — which had been abolished by Austria in 1849 — was restored; and Francis Joseph I, Emperor of Austria, was crowned King of Hungary.⁵ The Dual Monarchy, as it is called, probably contains the greatest diversity of races in contiguous territory and under one government of all the great powers.

The history of modern Russia begins with Peter I, the Great (1689-1725). In the ninth century, bands of Swedes settled around Novgorod, subjugated the Slavs and laid the foundation of the future Empire of Russia.⁶ For two Outline of Russian history hundred and fifty years, ending in 1480, Russia was

¹ Floetz, p. 502.

² *Ibid.*, p. 503.

³ *Ibid.*, pp. 193-94 and 277.

⁴ See *Encyclopædia Britannica* (1910), vol. XIII, p. 916.

⁵ Floetz, pp. 278, 372, 398, 400, 483, 495, 498, 510-11.

⁶ *Ibid.*, p. 208.

in the hands of the Mongols. In the fourteenth century, Moscow became the national center of Russia.¹ Toward the close of the sixteenth century, Russians began to emigrate into Siberia and within eighty years had reached the Amur and the Pacific.² Peter the Great, in his effort to Europeanize or modernize Russia, founded the city of St. Petersburg (1703).³ The reign of Catherine II added much to the power and prestige of Russia. During her reign there took place the three divisions of Poland (1772, 1793, and 1795) which have been the cause of so much discord in Europe since.⁴ Vast in territory, with a population of over one hundred and seventy millions, Russia lacks and always has lacked one thing — an ice-free port. For one hundred years she has set her eyes on Constantinople, and is fighting for it in the present war.

Only one other of the great powers remains to be discussed — Japan. We have spoken of the origin of the Japanese. At the beginning of historic times, according to the Japanese
 Outline of Japanese history
 660 B.C., the form of government in Japan was that of an empire under a Mikado.⁵ In the seventh century A.D., changes took place which resulted in the military obtaining predominance over the civil power, and the actual government passed from the Mikado into the hands of a usurping military chieftain — later called the Shogun. The final outcome of this system of dual government was a feudal system corresponding in large measure to that of mediæval Europe.⁶ After 1680, the Shogun became a shadow and the great mass of feudal chiefs likewise. The government really fell into the hands of the vassals. This state of affairs, with its oppression, weakness, and anarchy, lasted until 1868. The revolution which involved the fall of the Shogunate and ultimately of feudalism, though essentially imperialistic in its prime purposes, may be called democratic with regard to the personnel of those who planned and directed it. There took place under the guidance of the nobles and the Samurai a restoration of the administrative power to the Emperor.⁷ Japan in 1854 had been reopened to the Western world by the

¹ Ploetz, p. 277.

² *Encyclopædia Britannica* (11th ed.), vol. xxv, pp. 17-18.

³ Ploetz, p. 395.

⁴ *Ibid.*, pp. 411, 413-14.

⁵ *Ibid.*, p. 33.

⁶ *Ibid.*, pp. 212-13.

⁷ *Encyclopædia Britannica* (11th ed.), vol. xv, pp. 264-65.

American naval officer Commodore Perry.¹ She became one of the great powers by defeating Russia in the war of 1904-05. Later she established her rule over Korea and her dominance over China.

Such described in a very brief way is the origin and development of the great modern nations — the nations whose credit is under special consideration in this chapter. In view of the fact that national obligations depend principally for their payment on national good faith, we consider these historical facts of interest and of importance in attempting to estimate national credit.

Bearing of
historical
development
on credit

The credit of any nation at any given time may be said to be determined by three leading considerations: —

- (1) Its debt statement or the size of its debt compared with its resources and with its population.
- (2) Its debt history or its record of good or bad faith.
- (3) Its general standing with the other nations of the civilized world.

Three leading
considerations
in estimating
national
credit

Under the last heading come such considerations as the military position of a nation, the form and stability of its government, the character of its population and of its institutions, its trade position and its general economic and financial status.

In order to understand the abnormal conditions affecting credit created by the great war, it is first necessary to know the normal conditions or the conditions before the war.

Normal con-
ditions vs.
the war

Let us consider first what may be called the obvious or natural reason for the credit of a nation or for the prices of its government bonds; that is, the size of the debt compared with the estimated resources and with the population. The accompanying table (Table I) gives recent estimates of population and wealth and recent figures of the debts of the United States, Great Britain and Ireland, Germany, France, Russia, Austria-Hungary, Italy, and Japan.

Population,
wealth, and
debt of the
leading civilized
nations

It is very difficult to give figures of estimated resources sufficiently accurate to be of great value in figuring percentage of debt

¹ Ploetz, p. 563.

16 AMERICAN AND FOREIGN INVESTMENT BONDS

to resources. At the same time it is desirable to try to form at least some general idea of the proportion between wealth and debt. Percentages, figured from estimates of wealth which differ so much

TABLE I

Country	Estimated Population ¹	Estimated Wealth ²	Debt	Wealth per capita	Debt per capita	Per cent debt to est. wealth
United States.....	95,411,000	\$187,739,071,090 ³	\$1,026,686,026 ¹⁰	\$1967.69	\$ 10.76	.55
Great Britain and Ireland.....	45,663,000	86,400,000,000 ⁴	3,470,070,854 ¹¹	1892.12	76.10	4.03
Germany ¹	66,146,000	76,800,000,000 ⁴	4,869,674,212 ¹²	1161.07	73.62	6.34
France.....	39,660,000	62,400,000,000 ⁴	6,343,622,400 ¹³	1573.37	159.95	10.17
Russia ²	167,920,000	40,000,000,000 ⁴	4,538,654,400 ¹⁴	238.21	27.03	11.35
Austria-Hungary..	50,237,000	25,000,000,000 ⁴	3,812,798,400 ¹⁵	497.64	75.90	15.25
Italy.....	35,026,000	20,000,000,000 ⁴	2,578,435,200 ¹⁶	571.00	73.61	12.89
Japan.....	52,312,000	9,749,040,000 ³	1,251,316,800 ¹⁷	186.36	23.92	12.84

The figures in this table are reduced to dollars on the basis of

Dollar = 4 shillings 2 pence English.

Mark = 11.8 pence English.

Franc = 9.6 pence English.

Yen = 2 shillings ½ pence English.

¹ German Empire and States.

² Exclusive of Finland.

³ *Statistical Abstract for the Principal and Other Foreign Countries in each Year from 1901 to 1912*, no. 39 (London, 1914), pp. 12-13. Population of the United States estimated as of June 1, 1912; of Great Britain and Ireland, Germany and Italy, as of June 30, 1912; of France, Austria-Hungary, and Japan, 1912; and of Russia, 1911.

⁴ Figures for estimated wealth as given by different authorities vary greatly. For instance, the Paish estimate for the United States in 1914 figures about \$144,000,000,000, and the German estimate of Helfferich for 1911 (*Germany's Economic Progress and National Wealth, 1888-1913*, by Dr. Karl Helfferich, director of the Deutsche Bank [Germanistic Society of America, 1914], p. 115) about \$118,000,000,000; the Paish estimate for Great Britain and Ireland in 1914 comes to about \$81,600,000,000; the Helfferich estimate for Germany in 1911 amounts to about \$70,800,000,000 (Helfferich, p. 113); the Paish estimate for France in 1914 amounts to about \$48,000,000,000 and the estimate of Thérin in 1908, \$54,870,000,000 (see Helfferich, p. 114); the *Economist* estimate, by implication, for Russia and Austria-Hungary in 1913 amounts in each case to about \$43,200,000,000. The estimates given from the *Commercial and Financial Chronicle*, for Russia, Austria-Hungary, and Italy, are given in the *New Websterian Dictionary* (1912, p. 1039), as coming from the Bureau of Statistics, Department of Commerce and Labor, but they do not so come. The original source of these estimates is unknown to the writer; but the estimates are reasonable in view of earlier estimates of the wealth of the same countries.

⁵ Estimate for 1912. Department of Commerce, Bureau of the Census, *Estimated Valuation of National Wealth, 1850-1912* (Washington, 1915), p. 15.

⁶ Estimate for 1913, *Economist* (London), vol. LXXX, p. 51.

⁷ Estimate for 1913, *Economist*, vol. LXXX, p. 51; and Paish estimate for 1914, *Statist* (London), vol. LXXX, p. 419.

⁸ *Commercial and Financial Chronicle*, vol. xoo, p. 932.

⁹ *Encyclopædia Britannica* (11th ed.), vol. xv, p. 219. Estimated from *Statistics for the Year 1904-05*.

¹⁰ Principal of the public debt, July 1, 1912, less net available cash in Treasury (except agency account), June 30, 1912. *United States Treasury Department*, Circular no. 52 (Washington, 1913), pp. 19, 22.

¹¹ Aggregate gross liabilities March 31, 1912. *Statistical Abstract for the United Kingdom in Each of the Last Fifteen Years from 1890 to 1913*, no. 61 (London, 1914), p. 10.

¹² Total public debt of German Empire, year ending March 31, 1912. Total funded and floating public debts of 26 States January 1 to April 1, 1912. (Figures for Bremen and Hamburg include municipal debt.) *Statistical Abstract for the Principal and Other Foreign Countries*, no. 39 (London, 1914), p. 437. Debt of Empire, \$1,165,166,400; debt of States, \$3,704,507,812.

¹³ Total capital of the public debt January 1, 1912, République Française, Ministère du Travail et de la Prévoyance Sociale, *Statistique Générale de la France, Annuaire Statistique* (Paris, 1913, statistics for 1912, Imprimerie Nationale), vol. XXXII, p. 133^a.

¹⁴ Total public debt of Russian Empire January 1, 1912. *Statistical Abstract for the Principal and Other Foreign Countries* (1914), p. 431.

¹⁵ Total combined Austrian and Hungarian public debts, 1912. *Ibid.*, p. 450.

¹⁶ Total "effective" public debt, year ending June 30, 1912. *Ibid.*, p. 445.

¹⁷ Total public debt March 31, 1912. *Ibid.*, p. 460.

in certain cases from other estimates, should be used only in connection with other data in estimating the burden of the debt. This table shows the United States by far in the lead of all other nations in the amount of total wealth or resources. The wealth of Great Britain and Ireland, while less than half that of the United States, is shown to be larger than that of any other great nation — with Germany a close third and France with a total wealth estimated at \$14,400,000,000 less than that of Germany. The table shows also the United States with the smallest actual debt and very much the smallest percentage of debt to resources. Figured on this percentage basis, the burden of debt is next lightest on Great Britain and Ireland, then on Germany, then on France, then on Russia, then on Japan, then on Italy, and heaviest of all on Austria-Hungary. In the matter of *per-capita* wealth, the United States is not greatly ahead of Great Britain and Ireland, but both these countries are considerably ahead of France, very much ahead of Germany, and in an entirely different class from all the other nations considered. The debts figured on a *per-capita* basis show a very small debt for the United States, moderate debts for Japan and Russia, large and substantially equal debts for Italy, Germany, Austria-Hungary, and Great Britain and Ireland, and an abnormally heavy debt for France.

In estimating the burden of debt it is a matter of considerable importance to know what proportion of the debt represents income-producing property, such as railways, and what proportion may be called non-productive or dead-weight debt. It is also important to know whether any other assets exist which properly may be considered as an offset to at least a part of the debt. For instance: from the debt of the United States in 1912, in estimating its true burden, we may fairly deduct \$134,631,980 of Panama Canal bonds;¹ from the debt of Great Britain and Ireland we may fairly deduct estimated market value of Suez Canal shares, \$211,420,800, and other assets, \$17,781,053, or a total of \$229,201,853; ² from the combined debt of the German Empire and the twenty-six German States we may properly deduct \$4,077,387,590 as the estimated cost of construction on a mileage

Assets off-
setting to
some extent
national debts

¹ U.S. Treasury Department, Circular 52, p. 17.

² Statistical Abstract for The United Kingdom, no. 61 (London, 1914), p. 10.

basis of the government-owned railways;¹ from the debt of France we should not only deduct the value of the state railways actually owned, say, \$821,548,997, but should take into consideration the fact that between 1950 and 1958 practically all the railways of France, valued in 1911 at \$3,701,184,000, after amortizing themselves will become the property of the Government;² from the debt of Russia we may deduct \$1,557,633,600 incurred on account of railways;³ from the debt of Austria-Hungary we may deduct, say, \$2,079,198,749 as the value of the 22,034 miles of state railways,⁴ and also from the debt of Italy we should deduct, say, \$1,131,300,000 as the cost of construction of the Italian state railways;⁵ and from the debt of Japan we should deduct, say, \$290,534,400 as the value of state-owned railways.⁶ In deducting the value of railways from national debts, it should be noted that there is a great difference in the revenue-producing powers of the state railways in different countries: for instance, the railways of Prussia-Hesse in Germany are operated with such success financially as to be a source of considerable net income to the State above the charges on their capital; the railways of Japan also have been a financial success; those of Russia, on the other hand, have been up to date so unprofitable as to compel as a whole a large annual contribution from the State for their support.⁷ The government-owned railways of Italy have failed by a good deal to earn the interest on their capital; and those of Austria-Hungary usually have earned less than the interest on their debt.⁸ The French lines are beginning to show a measure of prosperity.⁹ It is impossible to make statements

¹ *Statistical Abstract for the Principal and Other Foreign Countries*, no. 39 (London, 1914), pp. 387, 407. As a further set-off against the debt of the German Empire, there existed in 1912 a variety of invested funds as well as the war treasure at Spandau of about \$28,320,000; and as a further set-off against the debts of many of the twenty-six German States, there existed a variety of funds and income-producing property other than railways. *Statesman's Year-Book*, 1913 (London, 1913), pp. 869, 900-50.

² *Statistical Abstract for Foreign Countries*, pp. 390, 407. Samuel O. Dunn, *Government Ownership of Railways* (New York and London, 1915), p. 22.

³ *Statistical Abstract for Foreign Countries*, p. 431.

⁴ *Ibid.*, pp. 396-97, 408. Dunn, p. 382.

⁵ Figures for 1910, Dunn, p. 30. Italy has various other income-producing property including the Cavour Canals. *Statesman's Year-Book* (1913), p. 990.

⁶ *Statistical Abstract for Foreign Countries*, p. 404.

⁷ Dunn, p. 317.

⁸ *Ibid.*, pp. 315-16.

⁹ *Ibid.*, p. 316.

absolutely definite about such matters as these; but it is perhaps fair to say that, taking into consideration the value of income-producing property, the debt of Germany in 1912 was less of a burden on the resources and population of the country than that of any other nation except the United States, and that the debt of Great Britain and Ireland was probably the largest dead-weight debt — with the possible exception of Russia — of any country in the world, but was not by any means the most burdensome on the resources and population of the country.

There is another way in which we may estimate the burden of debt — that is, by comparing the annual debt charge with the estimated national income or earnings of the people and with the annual government expenditure. Table II shows estimated national income, annual debt charge and percentage of debt charge to national income, wherever recent reliable data can be obtained, of the countries under special consideration in this chapter.

This table, omitting Italy and Japan from consideration, shows the burden to be by far the lightest in the case of the United States and the heaviest in the case of France. In connection with this table, as with the previous one, there should be borne in mind the income-producing powers of the various state railways and other productive works.

Table III shows total government revenue and expenditure, debt charge and percentage of debt charge to total expenditure for the same countries.

This table shows the percentage of debt charge to government expenditure to be much the smallest in the case of the United States and the largest in the case of France — with Japan a close second.

In the three tables referred to we have applied various tests to the debt statements of the leading civilized nations in an effort to estimate from this point of view their credit. It may be of interest to trace briefly the growth in population, wealth, and income and the increase in debts of the great nations of the world. It must be remembered that almost all figures of this kind, even figures of debts, are approximations. It is perhaps not unfair to say that hardly any

Debt charge
compared with
national
income

Debt charge
compared
with total
government
expenditure

Growth in
population,
wealth,
income, and
debt

20 AMERICAN AND FOREIGN INVESTMENT BONDS

two authorities agree on the amount of a nation's debt at any given time.

As giving us some standard to appreciate from what small beginnings the great nations of to-day have developed, we would say that the population of the Roman Empire at the death of Augustus, 14 B.C., has been estimated at 54,000,000, divided as follows: Europe, 23,000,000; Asia, 19,500,000; Africa, 11,500,000.¹ The population of the

Growth in
population of
the leading
civilized
nations

TABLE II

Country	Estimated national income ^a	National debt charge ^a	National income per capita	National debt charge per capita	Percentage of debt charge to income
United States.....	\$33,600,000,000 ¹	\$22,616,000 ⁷	\$352.16	\$.24	.07
Great Britain and Ireland..	10,800,000,000 ²	117,600,000 ¹⁴	236.52	2.58	1.09
Germany.....	10,080,000,000 ²	215,065,054 ⁸	152.39	3.25	2.13
France.....	6,000,000,000 ²	244,358,400 ⁹	151.29	6.16	4.07
Russia.....	7,200,000,000 ²	199,428,156 ¹⁰	42.88	1.19	2.77
Austria-Hungary.....	4,320,000,000 ⁴	162,286,000 ¹¹	85.99	3.23	3.76
Italy.....		86,606,400 ¹²		2.47	
Japan.....		72,134,370 ¹³		1.38	

Dollar = 4 shillings 2 pence English.

Mark = 11.8 pence English.

Franc = 9.6 pence English.

Austrian krone and Hungarian korona = 10 pence English.

Russian rouble = 2 shillings 1½ pence English.

Japanese yen = 2 shillings 1 pence English.

¹ Estimate of Sir George Paish in 1914 in the *Statist*, vol. LXXX, p. 419.

² Estimate for 1913. *Economist* (London), vol. LXXX, p. 51.

³ This is by implication the *Economist* estimate for 1913 (vol. LXXX, p. 51). The total national income for the United Kingdom, France, and Russia is given as the equivalent of \$24,000,000,000 with definite figures for the United Kingdom and France.

⁴ *Economist* estimate by implication for 1913 (vol. LXXX, p. 51).

⁵ These estimates, like those for national wealth, should be used with great care. As compared with the national income of Great Britain and Ireland as given in the table, Sir George Paish (*Statist*, vol. LXXX, p. 419) estimates this in 1914 at about \$11,520,000,000; the Paish estimate for Germany made at the same time is about \$9,600,000,000 and for France about \$5,760,000,000 (*Ibid.*); the estimate of Helfferich for Germany in 1911 was about \$9,440,000,000 (Germany's *Economic Progress*, p. 99) and of Steinman Bucher in 1908 (see Webb, *New Dictionary of Statistics* [1911], p. 630), about \$8,400,000,000; and the estimate of A. de Laverne and Paul Henry for France about 1907 (Webb [1911], p. 630) was from about \$4,320,000,000 to about \$5,280,000,000. The most recent estimate of the national income of Italy which we have found is that made by Mulhall, in 1888, about \$1,747,200,000 (Mulhall, *Dictionary of Statistics* [London, 1899], p. 322). So far as we know, there is no reliable estimate of the national income of Japan.

⁶ Unless otherwise stated, this is the total public debt charge for the calendar year 1912.

⁷ Interest on the public debt for the year ending June 30, 1912. *Statistical Abstract for the Principal and Other Foreign Countries*, No. 30 (London, 1914), p. 456.

⁸ Total public debt expenditure of the German Empire and States, year beginning April 1, 1912. *Statistisches Jahrbuch für das Deutsche Reich*, issued by Statistisches Amt 1913 (Berlin), p. 346. (Interest for 1912, \$176,967,668.)

⁹ Total annual debt expenditure, 1912 (total interest paid \$146,073,600), République Française, Ministère du Travail et de la Prévoyance Sociale. *Statistique Générale de la France, Annuaire Statistique* (Paris, 1913, Imprimerie Nationale) vol. XXXII, p. 133.

¹⁰ Public debt services, Russian Empire, 1912 (interest for 1911, \$188,688,743). *Statistical Abstract for Foreign Countries* (1914), p. 431.

¹¹ *Statistical Abstract for Foreign Countries* (1914), pp. 447, 449.

¹² Interest on "effective" debt, year ending June 30, 1912. *Statistical Abstract for Foreign Countries* (1914), p. 445.

¹³ National debt consolidation fund, year ending March 31, 1912. *Statistical Abstract for Foreign Countries* (1914), p. 450.

¹⁴ National debt services for year ending March 31, 1912. *Statistical Abstract for the United Kingdom*, no. 61 (London, 1914), p. 5. (Interest of funded debt for 1912, \$72,972,969.60.)

¹ Estimated by Bodio (Mulhall, *Dictionary of Statistics* [London, 1899], p. 441).

UNITED STATES AND FOREIGN GOVERNMENT BONDS 21

United Kingdom has been estimated at early dates as follows: 1066, 3,500,000; 1381, 3,860,000; 1528, 5,676,000. The population of France in 1328 has been estimated at 10,000,000.¹ The population of all Europe before the fifteenth century hardly exceeded 50,000,000.² The following table³ shows estimates of the population of what are now the leading countries of Europe at intervals of one

TABLE III

Country	Total government revenue ¹	Total government expenditure ¹	Government revenue per capita	Government expenditure per capita	National debt charge ¹⁰	Debt charge per capita	Percentage of debt charge to expenditure
United States	\$ 992,240,000 ¹	\$ 965,274,000 ¹	\$10.40	\$10.12	\$ 22,616,000 ¹¹	\$.24	2.34
Great Britain and Ireland	888,433,373 ²	857,016,480 ²	19.46	18.77	117,600,000 ¹²	2.58	13.72
Germany.....	681,120,600 ³	681,120,600 ³	10.30	10.30	55,815,888 ¹³	.84	8.10
France.....	886,185,600 ⁴	926,308,800 ⁴	22.34	23.36	244,358,400 ¹⁴	6.10	26.38
Russia.....	1,586,784,000 ⁵	1,606,670,400 ⁵	9.45	9.57	199,428,156 ¹⁵	1.19	12.41
Austria-Hungary...	1,025,635,200 ⁶	1,039,526,400 ⁶	20.42	20.60	162,286,000 ¹⁶	3.23	15.61
Italy.....	549,105,600 ⁷	549,105,600 ⁷	15.68	15.68	86,606,400 ¹⁷	2.47	15.77
Japan.....	322,024,080 ⁸	286,833,930 ⁸	6.16	5.48	72,134,370 ¹⁷	1.38	25.15

Dollar = 4 shillings 2 pence English.

Mark = 11.8 pence English.

Franc = 0.6 pence English.

Austrian krone and Hungarian korona = 10 pence English.

Russian rouble = 2 shillings 1½ pence English.

Japanese yen = 2 shillings ½ pence English.

¹ Total government revenue and expenditure, unless otherwise stated, given for calendar year 1912.

² Year ending June 30, 1912. *Statistical Abstract for Foreign Countries* (London, 1914), pp. 455-56.

³ Year ending March 31, 1912. *Statistical Abstract for the United Kingdom*, no. 61 (London, 1914), p. 1.

⁴ Budget estimate of German Empire only, year beginning April 1, 1912. *Statistical Abstract for Foreign Countries* (London, 1914), p. 436.

⁵ Budget estimate of 1912. *Statistical Abstract for Foreign Countries* (London, 1914), pp. 440-41.

⁶ *Statistical Abstract for Foreign Countries*, 1914, pp. 430-31.

⁷ Total combined revenue and expenditures of Austria and Hungary, 1912. *Statistical Abstract for Foreign Countries* (London, 1914), pp. 446-47, 448-49.

⁸ Budget estimate for year ending June 30, 1912. *Statistical Abstract for Foreign Countries* (London, 1914), p. 444.

⁹ Budget estimate for total revenue and expenditure for year ending March 31, 1912. *Statistical Abstract for Foreign Countries* (London, 1914), pp. 458-59.

¹⁰ Unless otherwise stated, this is the total public debt charge for the calendar year 1912.

¹¹ Interest on the public debt for the year ending June 30, 1912. *Statistical Abstract for the Principal and Other Foreign Countries*, no. 39 (London, 1914), p. 457.

¹² Public debt charge, German Empire only, year beginning April 1, 1912. *Statistical Abstract for Foreign Countries* (London, 1914), p. 436.

¹³ Total annual debt expenditure, 1912 (total interest paid, \$146,073,600), République Française, Ministère du Travail et de la Prévoyance Sociale, *Statistique Générale de la France, Annuaire Statistique* (Paris, 1913), Imprimerie Nationale, vol. XXXII, p. 133.

¹⁴ Public debt services, Russian Empire, 1912 (interest for 1911, \$188,688,743). *Statistical Abstract for Foreign Countries* (London, 1914), p. 431.

¹⁵ *Statistical Abstract for Foreign Countries* (London, 1914), pp. 447, 449.

¹⁶ Interest on "effective" debt, 1912. *Statistical Abstract for Foreign Countries* (London, 1914), p. 445.

¹⁷ National debt consolidation fund. *Statistical Abstract for Foreign Countries* (London, 1914), p. 459.

¹⁸ National debt services for year ending March 31, 1912. *Statistical Abstract for the United Kingdom*, no. 61 (London, 1914), p. 5. (Interest of funded debt for 1912, \$72,972,969.60.)

¹ Mulhall (1899), pp. 444-45.

² Estimated by Bodio (Mulhall [1899], p. 441).

³ Mulhall, p. 441. In the table, England at present stands for the United Kingdom of Great Britain and Ireland, Prussia for the German Empire and Austria for Austria-Hungary. The 1912 figures are from table on p. 16.

22 AMERICAN AND FOREIGN INVESTMENT BONDS

hundred years from 1480 to 1880 inclusive, and the estimated population in 1912.

POPULATION

	1480	1580	1680	1780	1880	1912
England....	3,700,000	4,600,000	5,532,000	9,561,000	35,004,000	45,663,000
France.....	12,600,000	14,300,000	18,800,000	25,100,000	37,400,000	39,660,000
Prussia.....	800,000	1,000,000	1,400,000	3,460,000	45,260,000	66,146,000
Russia.....	2,100,000	4,300,000	12,600,000	20,800,000	84,440,000	107,920,000
Austria.....	9,500,000	16,500,000	14,000,000	20,200,000	37,830,000	50,237,000
Italy.....	9,200,000	10,400,000	11,500,000	12,800,000	28,910,000	35,026,000

This table shows France greater in population than any of the other countries of Europe as far back as 1480—twelve years before the discovery of America; it shows Austria in the lead in 1580, France second, and Italy third. It shows France, Austria, Russia, and Italy all having a greater population than England in 1680. It shows after the eighteenth century a great relative gain for Great Britain and Ireland as compared with France and a very large gain for Germany and Russia. The population of the American colonies and of the United States at various dates has been as follows: ¹

1673.....	160,000
1701.....	297,000
1750.....	1,161,000
1775.....	2,803,000
1790.....	3,930,000
1810.....	7,240,000
1830.....	12,866,000
1860.....	31,443,000
1880.....	50,156,000
1912.....	95,411,000

This table shows the growth in population of the American nation from little more than bands of colonists to numbers larger than those of any of the countries of Europe except Russia. The accompanying table (p. 23) ² shows the population of the United States, Great Britain and Ireland, France, Germany, Austria-Hungary, Russia, Italy, and Japan for 1890, 1900, and 1912.

¹ Estimates apparently of Mulhall until 1790, then census figures. Mulhall (1899), p. 450. The 1912 figures are from table on page 16.

² Mulhall (1899), pp. 442. 450. *Encyclopædia Britannica* (11th ed., 1911), vol. 19, p. 269. Table, p. 16.

UNITED STATES AND FOREIGN GOVERNMENT BONDS 23

	1890	1900	1912
United States.....	62,481,000	76,303,387	95,411,000
Great Britain and Ireland.....	38,200,000	40,909,925	45,663,000
France.....	38,800,000	38,517,975	39,660,000
Germany.....	48,600,000	56,345,000	66,146,000
Austria-Hungary.....	40,100,000	45,089,531	50,237,000
Russia.....	92,000,000	129,211,113	167,920,000
Italy.....	30,300,000	32,449,754	35,026,000
Japan.....		43,759,577	52,312,000

This table is remarkable chiefly as showing the great growth in population of Russia, the United States, and Germany and the practically stationary condition of population in France. The population of all Europe in 1778 has been estimated at 150,000,000,¹ in 1882 at 327,800,000,² and in 1912 at 450,000,000.³ The population of the world in 1804 has been estimated at 640,000,000,⁴ in 1883 at 1,433,000,000,⁵ and about 1912 at 1,732,000,000.⁶

The growth in wealth has been even more remarkable. The following figures⁷ for the wealth of England and Wales or of the United Kingdom at different dates may be of interest:⁸

Date	Country	Estimated wealth	Authority
1660....	England and Wales	\$1,200,000,000	Petty
1703....	England and Wales	2,352,000,000	Davenant
1763....	Great Britain	5,280,000,000	Mulhall
1812....	United Kingdom	10,512,000,000	Colquhoun
1816....	United Kingdom	11,520,000,000	Mulhall
1833....	United Kingdom	18,000,000,000	Pablo Pebrer
1860....	United Kingdom	26,688,000,000	Mulhall
1865....	United Kingdom	29,342,400,000	Giffen
1870....	United Kingdom	33,984,000,000	Mulhall
1885....	United Kingdom	48,177,600,000	Giffen
1898....	United Kingdom	56,688,800,000	Mulhall
1913....	United Kingdom	86,400,000,000	Economist

¹ Estimated by Moheau (Mulhall [1899], p. 441).

² Estimate of Behm-Wagner (Mulhall [1899], p. 441).

³ *World Almanac* (1915), p. 62.

⁴ Estimate of Malte-Brun (Mulhall [1899], p. 441).

⁵ Estimate of Behm-Wagner (Mulhall [1899], p. 411).

⁶ *World Almanac* (1915), p. 62.

⁷ Reduced at the rate of \$4.80 to the pound sterling.

⁸ Mulhall (1899), pp. 589, 700, and (1903), p. 262. Webb, *The New Dictionary of Statistics* (London, 1911), p. 629. Table, p. 16.

24 AMERICAN AND FOREIGN INVESTMENT BONDS

Growth in wealth of the leading nations The wealth¹ of France at different dates has been estimated as follows:²

<i>Date</i>	<i>Estimated wealth</i>	<i>Authority</i>
1789	\$7,296,000,000	La Voisier
1815	8,640,000,000	Chaptal
1833	13,564,800,000	Flair
1860	20,928,000,000	Guyot
1865	23,232,000,000	Guyot
1871	33,600,000,000	Wolowski
1885	41,088,000,000	Guyot
1898	46,512,000,000	Mulhall
1913	62,400,000,000	Economist

Estimated figures for the wealth of the United States at different dates are as follows:³

<i>Date</i>	<i>Estimated wealth</i>	<i>Date</i>	<i>Estimated wealth</i>
1790	\$619,200,000	1850	\$7,135,780,228
1800	1,065,600,000	1860	16,159,616,068
1810	1,497,600,000	1870	24,054,814,806
1814	1,680,000,000 *	1880	43,642,000,000
1820	1,881,600,000	1890	65,037,001,197
1830	2,649,600,000	1900	88,517,306,775
1840	3,753,600,000	1912	187,739,071,090

* Estimate of Sir George Paish (*Statist*, vol. LXXX, p. 419).

Comparisons of early with recent estimates of the wealth of certain of the other countries under consideration are: Aggregate of the German States in 1814 probably less than that of France, or say less than \$9,600,000,000 compared with \$76,800,000,000 in 1913-14;⁴ Italy, in 1868, about \$9,283,200,000, and in 1884, from \$10,272,000,000 to \$11,712,000,000 (Pantaleoni), compared with say \$20,000,000,000 in 1912; and Austria-Hungary, in 1880, about

¹ Reduced at the rate of \$4.80 to the pound sterling.

² Mulhall (1899), pp. 591-92, 700. Table, p. 16.

³ Figures from 1790 to 1840, inclusive, except those of Sir George Paish, from Mulhall (1899), p. 593. Figures from 1850 to 1912, inclusive, from Department of Commerce (Bureau of the Census, *Estimated Valuation of National Wealth 1850-1912* [Washington, 1915], vol. I, pp. 20-21, 24-25). — Census figures are not always comparative. The figures for 1850, 1860, and 1870 are exclusive of exempt real estate. Figures for 1870 are on a gold basis.

⁴ Sir George Paish, *Statist*, vol. LXXX, p. 419, and table, p. 16.

UNITED STATES AND FOREIGN GOVERNMENT BONDS 25

\$18,240,000,000 (Beer), compared with say \$25,000,000,000 in 1912.¹ The following table² shows estimates by Mulhall of the wealth of the United States and of the leading nations of Europe in 1888 and 1898 compared with estimates from the table on p. 16 for 1912-13:—

	1888*	1898†	1912-13‡
United States.....	\$61,536,000,000	\$78,480,000,000	\$187,739,071,090
Great Britain and Ireland..	51,840,000,000	56,668,800,000	86,400,000,000
France.....	42,720,000,000	46,512,000,000	62,400,000,000
Germany.....	36,000,000,000	38,640,600,000	76,800,000,000
Russia.....	27,840,000,000	30,840,000,000	40,000,000,000
Austria-Hungary.....	20,160,000,000	21,657,600,000	25,000,000,000
Italy.....	13,920,000,000	15,168,000,000	20,000,000,000

* Michael G. Mulhall, *Dictionary of Statistics* (4th ed., London, 1899), p. 589.

† Mulhall (1899), p. 700.

‡ Table, p. 16.

Certain recent estimates³ of the wealth³ of the United States, Great Britain and Ireland, the British Empire, Germany, and France may be grouped as follows:—

United States.....	1903	(Giffen)	\$86,400,000,000
	1904	(Census)	107,104,192,410
	1912	(Census)	187,739,071,090
Great Britain and Ireland..	1903	(Giffen)	72,000,000,000
	1905	(L. G. Chiozza Money)	54,720,000,000
	1913	(Economist)	86,400,000,000
British Empire.....	1903	(Giffen)	106,800,000,000
Germany.....	1902	(Schmoller)	48,000,000,000
	1908	(Ballod)	60,240,000,000
	1908	(Steinman Bucher)	76,800,000,000
	1913	(Economist)	76,800,000,000
France.....	1908	(Lavergne & Henry)	43,200,000,000 (Private wealth only)
	1908	(Théry)	54,870,000,000
	1913	(Economist)	62,400,000,000

¹ Mulhall (1899), p. 592, and table, p. 16.

² Reduced at the rate of \$4.80 to the pound sterling.

³ Webb, *New Dictionary of Statistics* (1911), pp. 629-30, and Department of Commerce, *Estimated Valuation of National Wealth* (Washington, 1915), p. 15, and table, p. 16.

From the time of the close of the Napoleonic wars until the dates of the most recent estimates, the wealth of France has increased between six and seven-fold; that of Great Britain and Ireland, over seven-fold; that of Germany, about eight-fold; and that of the United States, nearly one hundred and twelve-fold.¹ These figures are startling and explain in great measure the ease with which Europe has borne the debts inherited from the Napoleonic wars or created in the one hundred years since, and the ease with which the United States paid off its Civil War debt.

The development of the national income, or what is sometimes called the total earnings of the people, has been no less remarkable than that of wealth. The national income of the United States has increased from less than \$480,000,000 in 1814 to about \$33,600,000,000 in 1914; that of the United Kingdom has increased from about \$1,440,000,000 in 1814 to about \$11,520,000,000 in 1914; that of France from, say, \$1,200,000,000 in 1814 to about \$5,760,000,000 in 1914; and that of Germany from a figure probably less than that of France in 1814 to about \$9,600,000,000 in 1914.²

The increase of national debts has been very great but very irregular. As will be shown later, large increases in debt usually took place for the purposes of war. The table on page 27 shows approximate figures for national debts at selected dates from 1713 to 1912 inclusive. These dates, with the exceptions of 1889 and 1912, are those of important historical events; namely, 1713, the Treaty of Utrecht which ended the War of the Spanish Succession; 1763, the Peace of Paris ending the Seven Years' War; 1793, the beginning of the Reign of Terror in France; 1816, the end of the Napoleonic wars; 1848, the year of Revolution in Europe; and 1870, the outbreak of the Franco-Prussian War.

In 1889, Spanish America, according to Mulhall, had debts amounting to about \$1,598,400,000; India had a debt of about

¹ Comparisons are made on the basis of Sir George Paish's figures for 1814 and the figures in table on p. 16.

² Estimates of Sir George Paish in the *Statist*, vol. LXXX, p. 419. These estimates may be compared with those of the *Economist*, vol. LXXX, pp. 50-51. For estimates of national income of various countries at different dates, see Webb, *New Dictionary of Statistics* (1911), pp. 629-30, and Mulhall (1899), pp. 320-22 and p. 747.

PUBLIC DEBT¹

	1713	1763	1793	1816	1848	1870	1889	1918
Great Britain.....	\$259,200,000	\$705,600,000	\$1,776,000,000	\$4,320,000,000	\$3,710,400,000	\$3,544,200,000	\$3,350,400,000	\$3,470,070,854
France.....	230,400,000	528,000,000	153,600,000	672,000,000	1,248,000,000	2,416,200,000	6,091,200,000	6,343,622,400
Germany.....	—	—	—	187,200,000	331,200,000	710,400,000	2,088,000,000	4,269,874,212
Russia.....	—	—	225,600,000	696,000,000	432,000,000	1,641,600,000	3,628,800,000	4,538,654,400
Austria.....	48,000,000	72,000,000	201,600,000	475,200,000	600,000,000	1,452,000,000	2,784,000,000	3,812,798,400
Italy.....	—	—	—	120,000,000	172,800,000	1,598,400,000	2,208,000,000	2,578,435,200
Japan.....	—	—	—	—	9,600,000	48,000,000	840,000,000	1,231,316,800
United States.....	—	—	81,600,000	124,800,000	48,000,000	2,528,000,000	1,060,800,000	1,026,686,026
Spain.....	33,600,000	52,800,000	96,000,000	561,600,000	542,400,000	1,568,000,000	1,248,000,000	1,204,602,644 (1913)
Holland.....	—	—	336,000,000	528,000,000	547,200,000	364,800,000	427,200,000	465,205,080
Europe.....	571,200,000	1,358,400,000	2,803,200,000	7,651,200,000	7,924,800,000	14,616,000,000	24,096,000,000	30,980,000,000 (about)
World.....	571,200,000	1,358,400,000	2,988,000,000	7,915,200,000	8,332,800,000	18,604,800,000	29,568,000,000	42,000,000,000 (about)

¹ Mulhall (1899), p. 260; table on p. 16 for 1912; *Statesman's Year-Book* (London, 1912), pp. 1053 and 1222; same (1913), pp. 955, 1039, 1052, 1151, 1174, 1260, 1308; same (1914), pp. 989 and 1337; *Statistical Abstract for Foreign Countries* (London, 1914), pp. 432-33, 435, 439, 452; *World Almanac* (1914), p. 298, and same (1915), p. 368; *Whitaker's Almanack* (London, 1915), p. 107. Dudley Baxter estimated total national debts in 1848 at about \$8,100,000,000 and in 1873 at about \$21,400,000,000 (*Journal of the Royal Statistical Society*, March, 1874, p. 2). Lord Avebury estimated national debts in 1867-88 at about \$24,469,908,000, and in 1867-98 at about \$30,877,233,600 (*Journal of the Royal Statistical Society*, March, 1901, p. 81).

28 AMERICAN AND FOREIGN INVESTMENT BONDS

\$892,800,000; Turkey, about \$864,000,000; Australia, about \$820,800,000; Portugal, about \$542,400,000; and Egypt, about \$494,400,000. As Mulhall remarks, the debts of the world increased from 1793 to 1889 — a period of ninety-six years — just about tenfold.¹ The origin of these debts or the purposes for which they were created has been given by Mulhall² as follows:—

Armaments	\$17,328,000,000
Railways and telegraphs	6,960,000,000
Roads and bridges	3,744,000,000
Sundries	772,800,000
Total	\$28,804,800,000

There is, it is to be noticed, a discrepancy between the total amounts of this table and the one on the preceding page, but undoubtedly the second table tells in a general way for what purposes the money borrowed was expended. Figures are not available showing the purposes for which debts were created up to 1912; but probably they would show somewhat the same proportion between debts for the various purposes. The debt increase by periods has been somewhat as follows:—

DEBT INCREASE OF WORLD FROM 1713 (TREATY OF UTRECHT) *

<i>Period</i>	<i>Increase</i>	<i>Per annum</i>
1713-1763	\$787,200,000	\$15,840,000
1764-1793	1,569,600,000	52,320,000
1794-1816	4,987,200,000	216,960,000
1817-1848	417,600,000	12,960,000
1849-1870	10,272,000,000	467,040,000
1871-1889	10,771,200,000	566,880,000
1890-1912	12,432,000,000	540,521,739
199 years	\$41,236,800,000	\$207,220,100

¹ Dudley Baxter has called attention to the fact that the large debt of Holland in the eighteenth century compared with her resources led to the loss of her commerce and political power. *National Debts* (1871), pp. 42 and 95-96.

² Mulhall (1899), p. 260.

³ *Ibid.* Mulhall's figures for the increase by periods are given in millions of pounds only. The figures, therefore, are merely approximate. See also our table "Public Debt."

As Baxter remarks, — treating of a period subsequent to the Napoleonic Wars, which so greatly increased the debt of Great Britain, — the rate of increase in debts was very different before and after 1860. Up to 1860 national borrowing was chiefly in Europe. The revolutions of 1848, the Crimean War of 1854, and the French-Austrian War of 1859 caused most of the increases in debts. After 1860 there was the American Civil War, the Prussian-Austrian War of 1866, and the Franco-Prussian War of 1870. Immense loans were made in America and in Europe. There took place what might be called an epidemic of borrowing. The average annual total loans were about as follows: 1848–54, \$96,000,000 a year; 1855–60, \$240,000,000 a year; 1861–73, \$960,000,000 a year; ¹ 1874–1912, \$500,900,000 a year. It is to be remembered that a considerable portion of the debts in the later periods were for productive purposes such as railroads. The public debts of the countries under special consideration in this chapter in 1900, at the end of a long period of peace, compared with the debts in 1912, were substantially as follows:

PUBLIC DEBTS IN 1900^a AND 1912

	Total debt	Debt per capita	Total debt	Debt per capita
	1900		1912	
United States	\$1,402,638,072	\$18.12	\$1,026,686,026	\$ 10.76
United Kingdom	3,019,008,154	73.80	3,479,070,854	76.19
France	5,193,834,520	135.36	6,343,622,400	159.95
German Empire	599,002,987	10.10	1,105,166,400	17.62
Prussia	1,582,003,200	45.00	2,225,214,264*	55.40*
Austria	1,720,502,400	66.46	2,494,228,800	86.02
Hungary	886,080,000	46.56	1,318,569,600	62.08
Russia	3,148,800,000	24.48	4,538,654,400	27.03
Italy	2,812,800,000	86.40	2,578,435,200	73.61
Japan	253,934,400	5.80	1,251,316,800	23.92

* Population December 1, 1910 (*Statistical Abstract for Foreign Countries*, p. 8). Debt 1912 (*Statistisches Jahrbuch* [Berlin, 1913], p. 346).

These figures show fairly recent changes in the debts of the various countries under special consideration.

The debt charges have not always varied in direct proportion to the size of the debts themselves. This is owing principally to a change in the rate of interest. There have Changes in
debt charges

¹ *Journal of the Royal Statistical Society*, March, 1874, pp. 2–3.

² *Encyclopædia Britannica* (11th ed., 1911), vol. XIX, p. 269.

been many conversions, especially in English and American debt history and some forced reductions in interest, as in the cases of France in early times, Austria, and other countries. We will take up this question when dealing with the debt histories of the separate countries.

We have outlined the relations between the population, resources, and debts of the leading civilized nations of the world.

Debt history We will take up now their debt history or record of good or bad faith. When it is remembered that there is no legal method of collecting a national debt or the interest on it against the will of the nation indebted, the importance of a nation's record becomes apparent.

Of the nations under special consideration, the debt history which goes back the farthest is that of France. Although there are records of earlier royal borrowings, the foundation of the French national debt was laid early in the fifteenth century.¹ Later Francis I (1515-47) obtained various sums through the city of Paris, which kept a list of the creditors and distributed the interest.² Part of this money he borrowed for his ransom. An extensive revision of the debt was carried out by Sully in 1604. Other attempts were made by Mazarin and Colbert.³

Throughout French debt history, owing partly to the various forced reductions and conversions, particularly in early days, and partly owing to lack of clearness in the records, the facts are very difficult to establish. Vührer has described the history of the various French loans previous to the nineteenth century as "a history of bankruptcies."⁴ All forms of loans were tried and all possible methods of evasion were used to escape payment. There were forced reductions and debasements of the currency. To costly wars and internal disturbances was added ignorance of financial and economic conditions.

Louis XIV spent great sums in war and in building Versailles. In this reign, the interest on the debt was reduced to 4%.⁵ At the

¹ *Encyclopædia Britannica* (11th ed., 1910), vol. x, p. 794.

² C. F. Bastable, *Public Finance* (1895), p. 576.

³ *Encyclopædia Britannica* (11th ed., 1910), vol. x, p. 794, and Bastable, *Public Finance* (London, 1895), p. 596.

⁴ Vührer, vol. 1, p. 220.

⁵ Leone Levi, *Journal of the Royal Statistical Society* (London, 1862), vol. xxv, p. 322; Mulhall (1899), p. 264.

death of Louis XIV, in 1715, the capital of the debt amounted to about \$595,200,000. This was arbitrarily reduced by the Regent in 1716 to about \$384,000,000.¹ The debt increased with John Law's State Bank and through his schemes for the creation of paper money. In 1721, by a series of measures both violent and arbitrary, the debt was reduced by half. In 1764, the Comptroller-General de Laverdy "so reduced the capital of the debt as to cause a new bankruptcy."² After this reduction, the debt amounted to \$460,-200,000 and the annual charge to \$18,135,000.³ In 1784, a sinking fund was established, but soon after was suppressed.

During the convention and revolutionary periods, "the famous assignats and all kinds of government papers were issued of fabulous amounts and utterly worthless."⁴ The public debt was consolidated in August, 1793. The use of paper money and forced loans, however, destroyed any benefit that might have been obtained.⁵ In 1798, Napoleon introduced a proper system of finances, but did not recognize the debt incurred during the Revolution. All perpetual and life annuities, old and new, were changed for two thirds of the amount into notes called *dette publique mobilisée* — exchangeable for land — and one third was entered in the Grand-Livre under the title of *tiers consolidé*. The two thirds exchangeable only for land soon lost all value and the one third became the origin of the present national debt of France.⁶ After some reductions for confiscations, the balance in annual interest was ascertained to be about \$7,680,000, representing a capital debt of about \$153,600,000. As illustrating French credit at this time, a price of seven francs per cent for the 5% rentes is interesting.⁷ The financial administration of Napoleon I had two great merits — (1) it refused to issue inconvertible paper money, and (2) it refused to meet war expenditure to any large extent by borrowing.⁸ It made up the deficiency by levying contributions on other nations. The debt at the close of the First Empire, including floating debt of about \$96,000,000, amounted to, say, \$339,096,000.⁹

¹ R. Dudley Baxter, *National Debts* (London, 1871), p. 49.

² Levi, vol. xxv, p. 322.

³ Bastable (1895), p. 597.

⁴ Levi, vol. xxv, p. 322.

⁵ Bastable (1895), p. 597.

⁶ Levi, vol. xxv, p. 322. See also 10th Census of the United States, vol. vii, p. 269. Bastable (1895), p. 597.

⁷ *Annuaire Statistique* (1912), p. 74°.

⁸ Bastable (1895), pp. 597-98.

⁹ Baxter, *National Debts* (1871), p. 50.

The Government of the Restoration was obliged (1) to meet the war indemnity levied on France by the Allies; (2) to compensate the *émigrés* or dispossessed proprietors; and (3) to take up the balance of the imperial outlay or deficits. These problems were handled with honesty and firmness. The Government refused to repudiate. To meet these expenditures, the Government between 1815 and 1830 made a net increase in interest on the debt of about \$19,200,000, representing a net capital increase of about \$432,000,000.¹ It was in 1825 that the 3% rentes were created.² The French debt in 1830 is given by Baxter as amounting to about \$680,496,000.³

The Orleanist Government began its career by borrowing. It created loans to clear off deficits, to prepare for war, and to carry out public works. During this period, however, the redemption of the debt was carried on. These were years of profound peace, during which the public credit stood high.⁴ The debt in February, 1848, according to Baxter, amounted to about \$873,600,000.⁵ The price of the 5% rentes in 1844 reached 126.30.⁶

The Second Republic added about \$10,176,000 to the interest charge, and brought the total charge up to nearly \$44,160,000 a year. This was a time of hazardous experiments on the part of the provisional government and of complete disorganization of the financial system.⁷ During this period, there were forced "conversions" or arbitrary reductions of interest.⁸ By loans, consolidations, and an indemnity for the emancipation of slaves, the Second Republic raised the capital of the debt to about \$1,177,200,000.⁹ In 1848, both the 5% and the 3% rentes sold at the lowest prices since the close of the Napoleonic wars. The 5% rentes were quoted at 50 and the 3% rentes at 32½.¹⁰

Under Napoleon III, even from the time of his presidency, "debts were accumulated as never previously." The apparent

¹ Bastable (1895), pp. 598-99. Baxter (1871), p. 51.

² *Annuaire Statistique* (1912), p. 74*.

³ Baxter (1871), p. 51. (In all Baxter's figures of the French debt after 1798, the sinking fund is excluded, but the caution money and floating debt are included.)

⁴ Bastable (1895), p. 599.

⁵ Baxter (1871), p. 51.

⁶ *Annuaire Statistique* (1912), p. 74*.

⁷ Bastable (1895), p. 599.

⁸ Francis W. Hirst, *The Credit of Nations* (National Monetary Commission, Washington, 1910), p. 84.

⁹ Baxter (1871), p. 51.

¹⁰ *Annuaire Statistique* (1912), p. 74*.

decrease between 1866 and 1868 was fictitious — caused by manipulating the accounts.¹ Through continued deficits and the Crimean, Italian, and other wars, France again heavily increased its debt.² The total cost of the Crimean War to France was about \$316,800,000, of which about \$295,200,000 was added to the debt. Further loans were issued much under par for the Italian War and the Mexican Expedition. The total addition to the debt between 1852 and July, 1870, was represented by an interest charge of about \$24,768,000. The total annual payment had risen to about \$69,120,000 and the capital to a little less than \$2,304,000,000.

The Franco-Prussian War was as marked in French debt history as the war with Napoleon I in the case of the English debt. In addition to the expenses of carrying on the war, there was an indemnity of about \$960,000,000. The total expense of the war has been estimated at about \$1,886,400,000, of which about \$1,632,000,000 was raised through loans.³ As showing the effect of the Franco-Prussian War on the credit of France, it is interesting to note that the 3% rentes sold in 1870 at a high price of 75.10 and in 1871 at a low price of 50.35.⁴

After the war, there were fresh loans for public works and to meet budget deficits. There had been in 1862 a conversion of the debt which had reduced the interest, but had increased the capital by about \$307,200,000. There were also conversions in 1883 and 1894.⁵

The French debt in 1912 was the largest in the world and nearly twice that of Great Britain and Ireland. The "falling-in" of the railway property, referred to earlier in this chapter, will lessen considerably the burden of the debt. Baxter in 1871 estimated the French debt charge,⁶ compared with the national income for different periods, as follows: 1818, 3.5%; 1837, 2.3%; 1870 (before the Franco-Prussian War), 2.3%; after the war, about 5%.⁷ These percentages compare with our figure of 4.07% in 1912.

¹ *Tenth Census*, vol. VII, p. 270.

² Baxter (1871), p. 51.

³ Bastable (1895), p. 600.

⁴ *Annuaire Statistique* (1912), p. 75*.

⁵ Bastable (1895), pp. 600-01. There was a successful conversion in 1852 by which a large amount of 5 per cents were converted into 4½% stock with a considerable saving in interest to the State. (Hirst, *Credit of Nations*, p. 93.)

⁶ The French debt charge for 1870 includes railway guarantees and the bridge and canal fund. (Baxter [1871], p. 53.)

⁷ Baxter (1871), pp. 55-57.

After France, the debt history of England or of the United Kingdom is older than that of any other country under special consideration. In 1672, the Exchequer was closed by Great Britain Charles II, and about \$6,376,924, which had been advanced on the credit of supplies voted by the House of Commons, was seized. Later this so-called "bankers" debt was consolidated with other debts and interest paid at the rate of 6%.¹

The British debt began in earnest after the Revolution of 1688 and with the wars of William III against France.² The principal of the debt at the time of the Revolution has been given as about \$3,188,462.³ The first loan raised by William III was for four years, with interest partly at 7% and partly at 8%, and was a charge on certain excise duties.⁴ The debt at the Peace of Ryswick (1697), exclusive of annuities, amounted to about \$103,275,562. During the five years of peace which succeeded, nearly one quarter of the debt was paid off.⁵

In 1711, there was established the celebrated South Sea Company, which has a curious connection with the history of the English debt. This company was formed to assist the Government in its financial operations. On government obligations amounting to about \$43,200,000, little or no interest had been paid. The securities were greatly depreciated. The South Sea Company was empowered to receive these obligations as subscriptions for its stock. The amount of the stock thus created was about \$44,054,246, which in 1715 was increased to about \$48,000,000 by the addition of certain arrears of interest.⁶ The wars of Marlborough under Queen Anne raised the debt at the time of the Peace of Utrecht, in 1713, exclusive of interest and annuities, to about \$250,297,742.⁷ During this reign, the system of raising money by

¹ Robert Hamilton, *An Inquiry concerning The Rise, Progress, Redemption, Present State, and Management, of the National Debt of Great Britain and Ireland* (3d ed., enlarged, Edinburgh, 1818). (In Samuel Jones Loyd, *Select Collection of Scarce and Valuable Tracts and Other Publications on the National Debt and The Sinking Fund*, [London, 1857], p. 474.)

² Baxter (1871), pp. 7-8.

³ Hamilton, p. 499.

⁴ *Ibid.*, p. 475.

⁵ *Ibid.*, p. 499.

⁶ *Ibid.*, p. 478, and Fenn's *Compendium of the English and Foreign Funds* (9th ed., London, 1867), p. 2.

⁷ Hamilton, p. 500.

mortgaging particular branches of the revenue was continued. Large amounts also were raised by annuities and by means of lotteries. The debt created was considerably larger than the amount of money received.¹

The reign of George I marked an important recovery of national credit, owing to the conditions of peace and to economy. In 1716, there was established the first sinking fund, usually called after Sir Robert Walpole. In 1717, after negotiations with the Bank of England and the South Sea Company, a general reduction in interest on the public debt to 5% was agreed upon. Ten years later, in 1727, the Government arranged to reduce from 5% to 4% the interest on its debt to the Bank and to the South Sea Company; and in 1732, the Government made a similar arrangement with the East India Company. The irredeemable annuities also were converted into redeemable debt, and a reduction of interest to 4% was agreed upon for this new capital. At the end of the reign of George I, the total debt, funded and unfunded, was estimated at about \$249,600,000 and the charge for interest at about \$5,844,245.²

During the first part of the reign of George II (1727-60), under the wise administration of Walpole, peace and financial progress continued. In 1739, however, there began a long war, first with Spain and afterwards with France and Spain together, which eventually added some \$144,000,000 to the national debt. Even under these conditions the Government was able to borrow at from 3% to 4%. In 1749, a law was passed providing for an important conversion of the public debt. All the public creditors who had been receiving interest at the rate of 4% were to have the rate reduced after December 25, 1750, to 3½%, until December, 1757, and after that date to 3%. Most of the creditors ultimately accepted this offer, and those who refused were paid off. Debts originally contracted at 3% were united in another fund called the 3% consolidated annuities. This latter operation was the origin of the 3% consols. It is a startling fact that British credit at this time stood as high as it did in 1910-12.³

The debt in 1756, at the beginning of the Seven Years' War,

¹ Hirst, *The Credit of Nations*, pp. 15-16.

² *Ibid.*, pp. 16-17. For an account of Sir Robert Walpole's Sinking Fund, see Hamilton, pp. 526-30.

³ *Ibid.*, pp. 17-18.

exclusive of interest and annuities, was about \$356,794,334.¹ About \$288,000,000 was added to the debt by the Seven Years' War, which was far more costly than its predecessors; and 3 per cents fell far below par.² The principal of the debt at the Peace of Paris in 1763 was about \$666,554,064. After a considerable reduction during the years of peace, the debt stood at the beginning of the American War, in 1775, at about \$617,201,448 of principal and about \$21,463,541 of interest and annuities.³ By this time it was clear that the national debt was growing at a dangerous rate; and it had all been spent on war. From a financial point of view, however, the war with the American colonies proved more disastrous than any of its predecessors. This was partly owing to the mismanagement of the finances. In 1781, a funding operation was put through by which about \$100,800,000 was added to the capital of the debt and only about \$57,600,000 reached the Exchequer. The credit of the country went from bad to worse. In August, 1774, before the beginning of the American Revolution, 3% consols had stood at 89. They had fallen more or less steadily during the war, until at the surrender of Lord Cornwallis they were quoted at 54.⁴ The debt at the Peace of Versailles in 1783, which ended the American War, stood at about \$1,199,287,814 of principal and about \$45,368,506 of interest and annuities.

At the beginning of the French Revolutionary wars in 1793, the principal of the British debt, according to Hamilton, stood at about \$1,171,769,448.⁵ In September, 1815, — before the Peace of Paris which closed the Napoleonic wars, — the principal of the debt, including apparently floating or unfunded debt, amounted to the enormous sum of \$4,132,987,435, and interest and annuities to \$156,698,966, or a total, funded and unfunded debt, of about \$4,289,686,401.⁶ In the opinion of Professor Levi, England would have done better to have fought the Napoleonic wars more with taxes and less with borrowings.⁷ A large part of this debt had been contracted at "ruinous rates." Between 1793 and 1815, on an average \$830.40 of stock was created for every \$480 of money obtained, so that the country really received only \$1,627,831,200,

¹ Hamilton, p. 500.

² Hirst, pp. 19-20.

³ Fenn (1867), p. 6.

⁴ Hirst, p. 18.

⁵ Hamilton, p. 500.

⁷ Levi (1862), p. 314.

⁶ Hamilton, p. 500.

or \$1,188,316,766 less than it engaged to pay.¹ Between 1800 and 1810, taxation amounted to nearly 25% of the estimated national income.² In 1816, the charge for interest was more than half of the whole public revenue from taxes. The national credit was much impaired. During the French wars, the price of 3% consols fluctuated between a maximum of 73 and a minimum of 47.³ In June, 1815, the month of Waterloo, the lowest price reached for consols was 53½.⁴

After Waterloo, the condition of Great Britain was very bad and the financial recovery slow. In 1822, Vansittart introduced a scheme which led to the conversion of the 5 per cents with a large saving of interest and which also provided for the establishment of a real sinking fund. This was created through making provisions for net surpluses in the revenue and applying the same to the reduction of the debt — the only sort of national sinking fund which means anything.⁵ Between 1823 and 1832, consols fluctuated between 72 for the lowest and 97 for the highest.⁶ The amount of the debt in 1854 as given by Baxter was about \$3,842,400,000, a considerable reduction from the debt at the close of the Napoleonic wars. The Crimean War which lasted about two years (1854-56) raised the debt, including annuities, to about \$4,003,200,000.⁷ The low point for consols during this period was 85½ in March, 1854.⁸

In the next twenty-one years, about \$336,000,000 of debt were extinguished; and in the twenty years after 1877, the reduction amounted to about \$590,400,000.⁹ These relatively large reductions of debt, combined with generally favorable financial conditions, led to the record high price for British consols on July 1, 1896. At this time, as 2½ per cents, they sold at 114, or on an income basis of about 1.95%.¹⁰ In 1899, the debt stood at about \$3,048,000,000.¹¹

From this figure in 1899, the lowest point in the British debt

¹ Levi (1862), pp. 315-16.

² *Ibid.*, p. 319.

³ Hirst, p. 21.

⁴ Messrs. Frederic C. Mathieson & Sons, London, England; enclosed in letter dated April 29, 1913.

⁵ Hirst, p. 21.

⁶ Mathieson letter dated April 29, 1913.

⁷ Baxter (1871), p. 9.

⁸ Mathieson letter dated April 29, 1913.

⁹ Hirst, p. 22.

¹⁰ Figures from F. C. Mathieson & Sons. This yield is allowing for loss, if redeemed at due date (1923) at par, and for a reduction of interest in 1903.

¹¹ Hirst, p. 22.

since the Napoleonic wars, the national debt rose in consequence of the Boer War to \$3,374,400,000 in 1901 and to \$3,830,400,000 in 1903. This was the largest debt since 1867, "so that the national savings of thirty-six years of peace were swept away by national borrowings during three years of war."¹ In the opinion of Mr. Hirst, editor of the "London Economist," more immediate injury was done to British credit by the financial policy which preceded the war than by the actual outbreak and carrying on of the war. The increasing expenditure before the war, the mismanagement of the sinking fund, and the apprehension of trouble in South Africa led to a greater fall in consols than did the actual outbreak and progress of the war.² Between March 31, 1906, and March 31, 1909, with Mr. Asquith as Chancellor of the Exchequer, the national liabilities were reduced by about \$201,600,000.³ In spite of this fact and owing probably to general financial conditions, the price of consols continued to sink until they reached a figure of 72½ on October 14, 1912.⁴

Baxter has estimated the percentage⁵ of debt charge to national income of Great Britain and Ireland at different dates as follows: 1700, 2.3%; 1712, 4.5%; 1736, 2.3%; 1784, 6.2%; 1815, 9%; 1843, 5.5%; 1870, 2.8%. These compare with our figure of 1.09% in 1912.

As Professor Bastable remarks, the growth of the English debt has been due altogether to war expenditure. It is all what may be called a "dead-weight" or unproductive debt.⁶ Writing in 1895, Professor Bastable considered that the reduction in the English debt during years of peace had been far from satisfactory. He held that the continued existence of such a big debt must be attributed largely to financial weakness.⁷ At the same time, while the British debt up to 1912 had not been reduced to the extent that it might have been, the burden of the debt, owing to reductions in interest

¹ Hirst, pp. 24-25.

² *Ibid.*, pp. 23-24.

³ *Ibid.*, p. 25. (For the various conversions of the English debt and for the history of the sinking fund, see Hirst, pp. 26-39.)

⁴ Figures from F. C. Mathieson & Sons.

⁵ In estimating the debt charges from 1784-1870, Baxter has deducted the amounts estimated as paid for reduction of capital. (Baxter, *National Debts*, p. 18.)

⁶ With the exception of "Other Liabilities," which represent mostly productive objects. (*Statesman's Year-Book* [London, 1913], p. 49.)

⁷ Bastable (1895), p. 594.

and to the great increases in national wealth and national income, was becoming steadily less. The great European War will add a new and extremely interesting chapter.¹

If we follow the historical order, the debt of Austria probably should be considered next. The financial and debt history of Austria is far from pleasant reading. From the latter part of the eighteenth century until the latter part of the nineteenth century (say, 1789-1870), there was not a year in which the revenue of the State equaled its expenditure. In 1763, at the end of the Seven Years' War, the capital of the debt, according to Baxter, was about \$72,000,000. In 1789, it had increased to about \$168,000,000. During the disastrous wars of the French Revolution and of the First Empire, the debt increased rapidly. Inconvertible bank-notes were issued on a large scale.² From 1799, the bank-bills fell lower and lower until they sank to about one seventeenth of their normal value. An imperial mandate of February, 1811, contained these words: "I give my imperial word that the bank-bills shall never be reduced in value."³ March 26, six weeks later, the Government reduced the value of the paper money, which had increased to \$515,849,000, to one fifth of its previous amount. By this process the paper money was reduced to \$103,169,800. This was increased again in 1816 to \$310,969,350. The new paper money soon fell to one quarter of its nominal value — thereby making the total loss nineteen twentieths. The owner of what had been originally \$48.67 really possessed but the value of \$2.40.⁴

The total Austrian debt in 1811 was about \$392,570,822. The wars of 1813 to 1815 required fresh sacrifices. There was also extravagance on the part of the Government. In order to get rid of a burdensome floating debt, new operations were begun in 1816 nearly equal to a second bankruptcy. The owners of paper money were given the option (1) of exchanging it for two sevenths of its value in bank-notes and accepting State paper at 1% for the remaining five sevenths; or (2) of exchanging the paper money for

¹ For detailed official history of the British national debt see: *National Debt History of the Early Years of the Funded Debt from 1694 to 1786* (London, 1898); *National Debt*; the report by the Secretary and Comptroller-General of the Proceedings of the Commissioners for the reduction of the national debt from 1786 to 31st March, 1890 (London, 1891).

² Baxter (1871), p. 65.

³ *Tenth Census*, vol. VII, p. 275.

⁴ *Ibid.*

shares in the newly established "National Bank."¹ In 1820, according to Baxter, the debt amounted to about \$473,760,000.² Between 1820 and 1840, loans followed one another rapidly — including lottery loans. The Metternich system, adopted from 1811 to 1840, increased the debt so that the annual interest rose from \$3,747,205 to \$19,806,665. After the pressing financial embarrassments in 1846 and 1847, the Revolution followed in Vienna, Hungary, and Italy in 1848. Paper money again was issued to an enormous extent.³ Baxter speaks of the successive deficits as having brought the debt in 1848 to about \$600,000,000.⁴

The wars with Hungary, Italy, France, and Prussia and the large military establishments in the intervals caused an enormous increase in the Austrian debt, and raised it in 1868 to about \$1,444,800,000.⁵ Writing a few years earlier, Professor Leone Levi spoke of the financial condition of Austria for a long series of years as "ruinous in the extreme."⁶

At one time the Government unfairly reduced the interest on the debt to one half its original percentage, and then forced creditors to contract a further loan under threat of loss of their previous claim.⁷ Mulhall gives the combined debts of the Austro-Hungarian Empire in 1875 and 1889: 1875, about \$1,948,800,000; 1889, \$2,785,920,000.⁸

Comparatively recent large additions to the Austro-Hungarian debts have been made for the acquisition of state railways and for public works.⁹ Baxter has estimated the percentage of debt charge to national income for Austria at different periods as follows: 1815-20, 1.8%; 1837-43, 2.2%; 1868-70, 2.2%.¹⁰ These compare with our figure in 1912 of 3.76%. Since the beginning of the present war, Austria has refused to pay interest or principal of notes held by citizens of enemy countries. Later on in this chapter, we give highest and lowest prices of Austrian rentes by ten-year periods from 1873 to 1912 inclusive.

¹ *Tenth Census*, vol. VII, p. 275.

² Baxter (1871), p. 65.

³ *Tenth Census*, vol. VII, p. 275.

⁴ Baxter (1871), p. 65.

⁵ *Ibid.*

⁶ *Journal of the Royal Statistical Society* (1862), vol. XXV, p. 327.

⁷ *Tenth Census*, vol. VII, p. 275.

⁸ Mulhall (1899), p. 267.

⁹ Hirst, p. 9. See also *Encyclopædia Britannica* (11th ed., 1910), vol. II, p. 976; vol. XIII, pp. 899-900.

¹⁰ Baxter, pp. 89-92.

The debt of what is now the United States originated during the American Revolution.¹ In July, 1776, Silas Deane, political and commercial agent for the United States in France, met Caron de Beaumarchais, who had induced the ^{United States} French king to aid the American colonies — perhaps partly in revenge for the loss of the great French Empire in America in the Seven Years' War. Apparently \$195,000 had been advanced by the French Treasury, June 10, 1776. Later, Beaumarchais arranged, under the guise of an ordinary commercial contract, to furnish the colonies with arms, ammunition and supplies. This, with the early domestic loans of the Continental Congress² and the loans of the separate colonies or States for war purposes, was the origin of our national debt.³

The first foreign loan negotiated by the Continental Congress was obtained in 1777 from the "farmers-general of France," a private corporation engaged in the collection of the national revenue of France. Up to that time the expenses of the Revolutionary Government in Europe had been met by small subsidies from France and Spain and by such remittances in specie as could be spared from home.⁴ From 1778 to 1782 various sums were advanced or loaned the United States by France. A contract for the repayment of these sums was drawn up and dated July 16, 1782. The total amount — \$3,510,000 — was to bear 5% interest and to be repaid in twelve annual payments of about \$292,500 each, beginning the third year after the conclusion of peace. The arrears of interest to the date of the contract and then to the date of the treaty of peace were to be made a gift by France.⁵ Although peace was made in 1783, the repayment actually began in 1791, and was made to the Revolutionary Government of France. The last

¹ From the close of the seventeenth and the early part of the eighteenth century until the time of the Revolution, Massachusetts, South Carolina, New York, and other colonies had outstanding at times varying amounts of so-called bills of credit or paper money. For the history of these issues, see Horace White, *Money and Banking* (Boston, 1902), pp. 103-114.

² After March 1, 1782, interest on the domestic debt was not met, and certificates of interest indebtedness, receivable for taxes by the States, were issued. (Davis R. Dewey, *Financial History of the United States* [New York, 1915], p. 46.)

³ Rafael A. Bayley, *The National Loans of the United States from July 4, 1776, to June 30, 1880. Tenth Census*, vol. VII, pp. 299-301. Davis R. Dewey, *Financial History of the United States* (New York, 1915), pp. 45-47.

⁴ *Tenth Census*, vol. VII, p. 304.

⁵ *Ibid.*, p. 305.

42 AMERICAN AND FOREIGN INVESTMENT BONDS

payment was made in 1795, at which time the small balance due was converted into $5\frac{1}{2}\%$ stock. All this loan was repaid.¹

The financial situation of the Continental Congress was at its worst in 1779 and 1780. Over \$200,000,000 in Continental currency had been issued — which in 1780 “quietly expired in the hands of its possessors.” The army was badly in need of food and clothing.² In 1781, a loan of \$1,950,000 was obtained in Holland on the credit of France.³ This loan was provided for in the contract drawn up July 16, 1782, — signed by the Comte de Vergennes and Benjamin Franklin.⁴ The repayment of the principal of this loan was begun in 1792, and a small unpaid remainder (\$176,000) was converted in 1795 into $4\frac{1}{2}\%$ stock. Later this stock was redeemed.⁵ In 1783, another loan was obtained from France; and between 1782 and 1794, eleven loans were raised in Holland and one in Antwerp (1791). These loans were all repaid in full.⁶

On assuming the position of Secretary of the Treasury, in 1789, Alexander Hamilton found himself temporarily without funds to meet the ordinary expenses of the Government. Under these circumstances, he decided to negotiate temporary loans with the Bank of New York and the Bank of North America. These loans were all repaid by 1790.⁷

The indebtedness of the United States at the organization of the present form of government, including arrears of interest to January 1, 1790, was: —

Principal of foreign loans.....	\$10,098,706.02 ^a
Balance due France for military supplies.....	24,332.86
Arrears of interest to January 1, 1790.....	1,760,277.08 ^b
Debt due foreign officers.....	186,988.78 ^c
Arrears of interest to January 1, 1790.....	11,219.32
Principal of domestic debt (estimated).....	28,858,180.65
Arrears of interest to January 1, 1790.....	11,398,621.80
Arrears and claims against the late government outstanding and subsequently discharged.....	450,395.52
Total debt of the United States January 1, 1790.....	\$52,788,722.03

¹ *Tenth Census*, vol. VII, p. 306. ² *Ibid.* See also Dewey, pp. 36-41.

³ There was also in 1781 a small loan or advance of moneys from Spain. The Spanish debt — \$174,011 — was repaid in 1792-93. (*Tenth Census*, vol. VII, p. 306.)

⁴ *Tenth Census*, vol. VII, p. 307.

⁵ *Ibid.*, p. 308.

⁶ *Ibid.*, pp. 309-22.

⁷ *Ibid.*, pp. 322-24.

⁸ Not only had the United States been delinquent in the payment of interest on the foreign loans for periods varying from four to six years, but it had failed to pay the installments of principal which began to be due in 1787. (Dewey, p. 89.)

⁹ Part of the amount due foreign officers who had fought in the Revolution was

To this total should be added the debts of the several States — estimated by Alexander Hamilton at that time to aggregate about \$25,000,000.

There were two kinds of debt about the settlement of which there was no dispute: (1) the foreign debt loaned in gold on the faith of the Continental Congress; and (2) paper money issued by Congress and by the several States. The foreign debt was paid in full; the paper money sank to no value and passed out of circulation.¹

By an act approved August 4, 1790 (Acts of 1st Congress, Session 2, chap. xxxiv, 1 Stat. L., p. 138), provision was made for the payment of the debt of the United States. Section 2 of this act authorized a loan of not over \$12,000,000, to be applied to the payment of principal and interest of the foreign debt. Section 3 authorized a loan to the full amount of the domestic debt, payable in certificates issued for the said debt according to their specie value and computing the interest upon such as bore interest to December 31, 1790.² Section 13 authorized a loan of \$21,500,000 to take care of the debt incurred up to January 1, 1790, by the respective States for the expenses of the war. Section 21 pledged the faith of the United States to make good any deficiencies in income necessary for interest on the debt, and section 22 provided for the creation of a sinking fund from the proceeds of the sales of western lands.

The evidences of the domestic debt and of the debts of the several States were taken in exchange on a basis which resulted as follows: In the case of the domestic debt, the National Government paid the interest immediately, on two thirds of the principal only, at 6%; it deferred interest on the remaining one third for ten years; and it allowed 3% interest on the arrears of interest — making up nearly one third of the whole debt. In assuming the debts of the various States, the Government paid immediately interest at 6% on four ninths of the entire sum; on two ninths it deferred interest for ten years; and it allowed only 3% on three ninths.³ The amount of State debts actually assumed was \$18,271,786.47.⁴

paid in cash in 1782 and part in 6% certificates of indebtedness. By 1803 most of these certificates had been redeemed and by 1828 all. (*Tenth Census*, vol. vii, p. 322.)

¹ *Tenth Census*, vol. vii, p. 325.

² This section also authorized refunding United States bills of credit or Continental currency on the basis of \$100 of currency to \$1 of specie.

³ Alexander Hamilton, *Works* (1851), vol. iv, pp. 251-52. Dewey, p. 95.

⁴ *Tenth Census*, vol. vii, p. 327.

By an act of August 12, 1790 (Acts of 1st Congress, Session 2, chap. 47, 1 Stat. L., p. 186), provision was made for reducing the debt by purchase at market price — not exceeding par or the true value thereof — from the surplus revenue derived from the duties on imports and the tonnage of ships or vessels to December 31, 1790.¹ This was followed by acts approved May 8, 1792, and March 3, 1795, establishing a formal sinking fund.²

On January 1, 1801, the debt of the United States stood at \$80,038,050.³ Under Jefferson's administration, with Gallatin as Secretary of the Treasury, the policy of public retrenchment with a view to the reduction of the debt and of taxation took the field. The result was a remarkable reduction of debt between 1801 and 1812. The net reduction was \$38,000,000, but the real amount paid off was larger; for the Louisiana Purchase was responsible for an increase of \$11,250,000 in the indebtedness.⁴

The increase in the public debt caused by the War of 1812 was nearly \$88,000,000.⁵ A committee of the House of Representatives estimated years afterwards that during this war the actual value in specie of the Treasury receipts for over \$80,000,000 par value of loans was only \$34,000,000. As illustrating the credit of the United States at this time, a 6% loan was put out in August, 1813, at 88½. Afterwards portions of a 6% loan were sold as low as 65 measured in specie.⁶ In January, 1816, the debt stood at \$127,334,933.⁷

After 1822, owing to constant surpluses in the revenue, the reduction of the debt was rapid;⁸ and in 1836 the United States for the first time in its history was practically out of debt. There was a small unpaid balance, — \$328,582.10, as estimated December 8, 1835, — which remained unpaid solely because payment had not been demanded. Under an act of June 23, 1836,⁹ surplus revenue to the amount of \$28,101,644.91 was distributed to the several States.¹⁰

¹ *Tenth Census*, vol. VII, p. 327.

² Acts of 2d Congress, Session 1, chap. 38, 1 Stat. L., p. 281. Acts of 3d Congress, Session 2, chap. 45, 1 Stat. L., p. 433.

³ *Financial Review* (1915), p. 90. ⁴ Hirst, p. 106; and Dewey, pp. 119, 121, 124.

⁵ *Tenth Census*, vol. VII, p. 352.

⁶ Dewey, p. 134.

⁷ *Financial Review* (1915), p. 90.

⁸ Hirst, pp. 109-10. Dewey, pp. 170-71.

⁹ Acts of 24th Congress, Session 1, chap. 115, 5 Stat. L., p. 52.

¹⁰ *Tenth Census*, vol. VII, p. 361.

In 1837, a year of general suspension of specie payments by the banks, Treasury notes were issued by the Government on a large scale.¹ There was a considerable deficit — amounting in September, 1837, to about \$2,000,000. Further issues of notes were made from 1838 to 1843 inclusive, and longer loans were made in 1841 and 1842. These, like the Treasury notes, were put out to take care of constantly recurring deficits and the constantly accumulating debt.²

The net indebtedness created by the Mexican War (1846-48) was \$49,000,000. All the loans, bearing 6% interest, were floated at par or better.³ Among these was a loan of \$16,000,000 issued under an act approved March 31, 1848,⁴ to take care of deficits occasioned by the war.⁵

On July 1, 1851, the debt stood at \$68,304,796. From that year it was reduced until in 1857 the net debt — principal of the debt less cash in Treasury — was only \$9,998,622. The panic of that year, followed by the failures of the revenue under a system of low tariffs, caused an increase in the debt until it reached \$59,964,402 on July 1, 1860.⁶

The Civil War bears much the same relation to American debt history as do the Napoleonic wars to British debt history. This great struggle caused an enormous increase in the debt of the United States; but owing to the great prosperity which followed the war, this large debt was reduced until it ceased to become much of a burden. In acts approved July 17 and August 5, 1861,⁷ Congress authorized a loan of not over \$250,000,000 — the first important loan authorized to carry on the Civil War. There were issued under these acts \$150,000,000 Treasury notes bearing 7.3% interest and \$50,000,000 twenty-year 6% bonds.⁸ On December 30, 1861, the banks suspended specie payment and were followed in

¹ There had been considerable issues of Treasury notes during the War of 1812. (See Dewey, pp. 136-37.)

² *Tenth Census*, vol. VII, pp. 361-63. In 1841, the Secretary of the Treasury informed Congress that during the previous four years, the expenditure had exceeded the revenue by \$31,310,014. (*Ibid.*, p. 362.)

³ Dewey, pp. 255-56.

⁴ Acts of 30th Congress, Session 1, 9 Stat. L., p. 217.

⁵ *Tenth Census*, vol. VII, p. 367.

⁶ *Financial Review* (1915), p. 90; and Hirst, p. 111.

⁷ Acts of 37th Congress, Session 1, chaps. 5 and 46, 12 Stat. L., pp. 259, 313.

⁸ *Tenth Census*, vol. VII, pp. 375-84. Dewey, pp. 276-81, 306.

this by the Government.¹ February 25, 1862, there was passed the famous Act ² authorizing among other things: (1) the issue of \$150,000,000 legal-tender United States notes; (2) the issue of \$500,000,000 6% bonds payable in twenty but redeemable after five years — familiarly known as the “five-twenties”; and (3) the creation of a sinking fund. Under this and later acts, there were issued something like \$450,000,000 of legal-tender notes or paper money. There were also issued enormous amounts of short-term Treasury notes. Long- and short-term loans followed each other in rapid succession in 1863, 1864, and 1865. In July and August, 1864, the average price in gold of the paper money or “greenbacks” was thirty-nine cents on the dollar. On July 1, 1864, the premium on gold measured in paper currency reached one hundred and eighty-five per cent. The total effect of paper issues in increasing the cost of the war has been estimated at between \$528,000,000 and \$600,000,000.³ The following prices,⁴ during the Civil War, of United States 6% bonds due in 1881 may be of interest: —

	<i>Low</i>	<i>High</i>
1861 (outbreak of war).....	84½ (April)	94 (April)
1861.....	83 (June)	95½ (October)
1862.....	87½ (January)	107½ (June)
1863.....	91½ (January)	110½ (October)
1864.....	102 (July)	118 (April)
1865.....	103½ (March)	112½ (January)

The debt reached its maximum on August 31, 1865, when it amounted to \$2,756,431,571.⁵ Of the gross debt, about \$1,110,000,000 was funded debt, about \$460,000,000 inconvertible paper, and about \$1,276,000,000 floating debt. The cash reserves in the Treasury amounted to about \$88,000,000.⁶ The annual interest charge on the debt was about \$151,000,000.⁷

The problems which faced the new Secretary of the Treasury after the war were: (1) How to pay off or fund the floating debt, and (2) how to provide a permanent scheme of debt reduction.

¹ Dewey, p. 281. ² Acts of 37th Congress, Session 2, chap. 33, 12 Stat. L., p. 345.

³ Dewey, pp. 284-97 and 306.

⁴ *Financial Review* (1915), p. 91.

⁵ *Ibid.*, p. 90.

⁶ Bastable (1895), p. 606. See also Dewey, pp. 316-17 and 332-33.

⁷ Bastable (1895), p. 607.

Soon after the close of the Civil War, the revenues began to show a surplus over expenditures. This surplus was applied from time to time to the redemption of short-term obligations.¹ Such portion of these obligations as could not be redeemed for lack of funds was converted into five-twenty bonds as authorized by the Acts of March 3, 1865,² and April 12, 1866.³ In a little over two years, the floating debt was reduced to \$408,000,000 and the inconvertible issues reduced by over \$20,000,000, while new funded debt to the amount of \$686,000,000 in 6% bonds had been issued. These transactions were completed by May 1, 1869.⁴ The Government then began using the surplus revenues in the purchase of its un-matured bonds at the market price in currency. It paid, in terms of gold, \$307,702,207.64 for bonds so purchased. The average price in gold was \$95.19.⁵ R. Dudley Baxter has estimated the burden of the American national debt and the American state debts on the basis of annual debt charge to estimated annual income for 1868-70 at 2.7%.⁶

Under Acts of July 14, 1870⁷ and January 20, 1871,⁸ there were authorized to be sold, at not less than par in coin, \$500,000,000 5% ten-year bonds, \$300,000,000 4½% fifteen-year bonds, and \$1,000,000,000 4% thirty-year bonds, the proceeds to be applied to the redemption of the war debt. The refunding operations under these acts began in 1871 and continued until the summer of 1879. A total of \$1,395,345,950 bonds were refunded under these acts; and the annual saving in interest to the Government was \$19,900,846.50. On January 1, 1879, specie payments were resumed. As the remaining Civil War debt matured, it was either continued at a lower rate of interest or redeemed in gold. The continued bonds also were redeemed from time to time as the surplus revenues permitted until no bonds remained outstanding except those authorized by the refunding acts. These last-mentioned bonds from

¹ *U.S. Treasury Department*, Circular 52 (Washington, 1913), p. 8.

² Acts of 38th Congress, Session 2, chap. 77, 13 Stat. L., p. 468.

³ Acts of 39th Congress, Session 1, chap. 39, 14 Stat. L., p. 31.

⁴ *U.S. Treasury Department*, Circular 52 (Washington, 1913), p. 8; and Bastable (1895), pp. 606-07.

⁵ *U.S. Treasury Department*, Circular 52 (Washington, 1913), p. 8.

⁶ Baxter, *National Debts* (1871), p. 92.

⁷ Acts of 41st Congress, Session 2, chap. 256, 16 Stat. L., p. 272.

⁸ Acts of 41st Congress, Session 3, chap. 23, 16 Stat. L., p. 399.

time to time were purchased with surplus revenues or redeemed as they became redeemable. The last of them — the residue of the 4% bonds of 1907 — were called for redemption April 2, 1907, and ceased to bear interest July 2 of that year.¹ The redemption of the American Civil War debt has been regarded by experts as little short of astounding. It makes the reduction of the British debt in the hundred years after the Napoleonic wars seem relatively insignificant. The methods by which the United States reduced its debt have been criticized;² but the result everywhere has been admired. The United States paid off its Civil War debt in the wholesale, wasteful, unscientific, but effective American way. The following figures give an idea of the extent and rapidity of the reduction of the debt: —

NET DEBT*

July 1, 1865	\$2,674,815,856
July 1, 1875	2,090,041,170
July 1, 1885	1,375,352,443
July 1, 1893	838,969,476

We have closed the statement with 1893 because in the following year new borrowings began.

The protective tariff, whether wise or unwise from any other point of view, undoubtedly was one of the chief factors which made possible the large reduction in the Civil War debt. The Wilson Tariff Act of 1894, on the other hand, combined with the effects of the panic of 1893 and the financial heresies which followed, led to a considerable enlargement of the United States debt. Between 1894 and 1896, \$262,315,400 of bonds were issued either to maintain the gold reserve of the Treasury or to redeem obligations of the United States.⁴ On July 1, 1896, the net debt stood at \$955,297,254. The war with Spain in 1898 brought the debt on July 1, 1899, to a net figure of \$1,155,320,235. From this date, there was a more or less steady reduction until 1908, when the debt stood at \$938,132,409.⁵ Since then there has been a moderate increase in the debt

¹ *U. S. Treasury Department*, Circular 52 (Washington, 1913), pp. 9-11.

² Baxter (1871), p. 31, and Hirst (pp. 122-23). ³ *Financial Review* (1915), p. 90.

⁴ *U. S. Treasury Department*, Circular 52 (Washington, 1913), pp. 11-12. See also Dewey, pp. 449-55.

⁵ *Financial Review* (1915), p. 90. Dewey, pp. 465-68.

through the issue of bonds for the construction of the Panama Canal ¹ and for the postal savings banks. As illustrating the high point which United States credit has reached, the Government was able in 1900 to issue 2% bonds at not less than par to refund issues bearing higher rates of interest.² These bonds were, to be sure, particularly attractive as a basis for national bank-note circulation. Their issue, however, together with the prices of all United States bonds for the past ten or a dozen years, showed the credit of the United States to be as high as, if not higher than, that of any other nation in the world.

Russia, like Austria, has been a country of paper money and of more or less continual deficits. Paper money was issued as early as the reign of Catherine II, under a manifesto dated December 29, 1768. At the death of the Empress, ^{Russia} there had been issued assignats for \$124,749,686. These became largely depreciated as compared with coin.³ Mulhall gives the total debt of Russia in 1799 as about \$225,600,000.⁴ There were further issues of paper money during the wars with Napoleon and with Turkey. In 1810, the amount of the debt outstanding was estimated at \$456,295,206. The Czar Alexander I declared the whole property of the State to be security for it. Three years of war — 1812-15 — required \$253,058,000 above the ordinary expenditures. In 1815, the assignats were exchangeable for silver rubles on the basis of 418 to 100. After the Napoleonic wars, the amount of the state debt acknowledged was not much above \$98,850,781, but the paper money in circulation amounted to something like \$661,114,025.⁵

Loans payable in paper — 6% at 83 $\frac{1}{4}$ — were contracted at home in 1817; in 1818, paper loans abroad were contracted with 6% interest at 85; in 1820, there was a silver loan abroad with 5% interest at 72. For \$31,632,250 of loans, the Government actually received only \$22,933,381. Later further loans were contracted at 77 to 77 $\frac{1}{2}$. In 1823, the assignats or paper money in circulation amounted to \$471,320,525.⁶ In 1839, an attempt was made to restore the silver standard, and the exchange of the silver ruble for

¹ *U.S. Treasury Department*, Circular 52 (Washington, 1913), pp. 16-17.

² See Dewey, p. 471.

⁴ Mulhall (1899), p. 266.

³ *Tenth Census*, vol. VII, p. 272.

⁵ *Tenth Census*, vol. VII, p. 272.

⁶ *Ibid.*

assignats was fixed at 350.¹ Mulhall gives the total Russian debt in 1840 as about \$720,000,000.² In 1843, the former bank assignats were withdrawn entirely from circulation by the creation of imperial bills of credit, which, with the forced exchange, were to circulate equally with the silver ruble. There came into existence \$131,160,205 of such bills, with which the 461,496,035 assignats which were still current in 1843 had been redeemed. In this way was carried through the compromise of the debt.³

The whole of the state property was to form security for the newly created imperial credit notes, and was to form sufficient capital for redemption. This state property was estimated at \$3,063,903,399, but the redemption fund was not sufficient. Meanwhile the deficits in the state finances continued. In 1849, the paper money was reduced to \$237,505,474. During the Crimean War, the issue of paper money increased greatly. In 1855, there were issued temporary bills of credit for "all the extraordinary expenses of the War"! The Treasury did not wish to increase taxes. The export of gold was forbidden, and the mass of paper money issued was to be called in within three years after the restoration of peace. As a matter of fact, however, the amount was not diminished until long after this.⁴ Dudley Baxter estimated the Russian debt in 1858, two years after the Crimean War, at about \$1,152,000,000.⁵

In 1862, there was put out a silver loan to furnish means of restoring a metal standard. The paper money was to be exchanged from May 1, 1862, with a loss of 10 $\frac{1}{4}$ %; afterward it was to be exchanged at a higher rate so that it should be at par by January 1, 1864. A beginning was made, but the means available proved insufficient. By a decree of November 19, 1863, payment of the paper money again was deferred. The forced rate of exchange returned and with it the variation of the standards. The Russian state debt for many years increased in a most serious manner. Deficits were becoming a permanent evil.⁶ Mulhall gives the total Russian debt in 1875 as about \$1,776,000,000 and in 1889 as about \$3,628,800,000. He gives the origin of the debt existing at this time as follows:⁷—

¹ *Tenth Census*, vol. VII, p. 272.

² *Tenth Census*, vol. VII, p. 272.

³ *Tenth Census*, vol. VII, p. 273.

⁴ Mulhall (1899), p. 266.

⁵ *Ibid.*, pp. 272-73. ⁶ Baxter (1871), p. 68.

⁷ Mulhall (1899), p. 267.

Redemption of the serfs (1858-63).....	\$408,000,000
Railways and telegraphs.....	816,000,000
Crimean War.....	681,600,000
Turkish War.....	638,400,000
Sundries.....	1,084,800,000
Total.....	\$3,628,800,000

The Russo-Japanese War (1904-05) was responsible for a considerable increase in the Russian debt. This debt has been huge for many years; but the population and the resources of Russia have also been huge — although the latter still are largely undeveloped. Baxter estimated the burden of the Russian debt, including railway guarantees, for 1868-70, on the basis of debt charge to estimated national income, as 2.5%.¹ Our figure for 1912, without deducting debt incurred for railways, is 2.77%. So far as the writer knows, Russia never has failed to fulfill her obligations to foreign creditors.² As illustrating the fluctuations in Russian credit for the past forty years, Russian 4% railroad bonds (Nicolai) sold in 1877 — at the outbreak of the Turko-Russian War — on about a 6.49% income basis; in 1891, they had recovered to about a 4.06% basis; and in 1896, 4% railroad bonds sold to yield only about 3.76%. In 1907, after Russia's defeat by Japan, Russian 4% rentes sold to yield about 5.89%.

The Italian Republics, as we mentioned in our introduction, very early inaugurated the system of funded debts. Early in the nineteenth century, the Kingdom of Naples was a large Italy borrower in proportion to her means and developed a debt of about \$120,000,000. The Kingdom of Sardinia before its era of annexation was very economical, and in 1847 had a debt of only about \$24,000,000. The troubles of 1848 and the wars with Austria and Russia increased the debt by 1858 to about \$192,000,000. On the constitution of the Kingdom of Italy in 1861, the consolidated Italian debt,³ including more than \$120,000,000 for that of Naples, amounted, according to Baxter, to about \$403,200,000,⁴

¹ Baxter (1871), p. 92.

² *Tenth Census*, vol. VII, p. 273.

³ A decree of July, 1861, for altering all former bonds into new 5% bonds for the purpose of the unification of the state debts affected the creditors of the former states in very unequal degrees, though generally very seriously. The market price of the older bonds varied greatly, but all were higher than the exchange for the new paper. (*Tenth Census*, vol. VII, p. 274.)

⁴ Baxter (1871), p. 58.

and according to Professor Levi, to about \$432,000,000.¹ Thus Italy entered the family of nations burdened with a heavy debt in proportion to her resources, which at that time were comparatively undeveloped.²

From 1861 the debt increased rapidly. Mulhall³ gives the total debt in 1870 as \$1,598,400,000; in 1880, as \$1,886,400,000; and in 1890, as about \$2,208,000,000. A considerable part of this increase was caused by continual deficits.⁴ Mulhall gives the debt⁵ about 1890 as made up as follows:—

Railways, about.....	\$384,000,000
War and military expenditure.....	1,296,000,000
Sundries.....	528,000,000
Total	\$2,208,000,000

The participation of Italy in the Triple Alliance and the ambitious colonial schemes under Crispi were responsible for a large part of the increase in the Italian debt and for the decline in her credit which at one time was so marked. In 1873, Italian 5% rentes sold to yield an income of about 7.80%, and in 1894, sold on about a 6.05% basis. Later, with the abandonment of her ambitious schemes of expansion, Italian credit recovered. In July, 1906, there took place a successful conversion of the 5% gross (4% net) and the 4% net rentes into 3½% stock, to be reduced after five years to 3¼%. The amount converted was about \$1,555,283,486, and the saving in interest was about \$3,840,000 per annum for the first five years and about double that afterwards.⁶ In January, 1913, Italian 3½% rentes sold to yield only about 3.65%. The national debt of Italy ever since the foundation of the modern kingdom has been a heavy burden on the population and resources of the country. Deficits have been frequent and the burden of taxation very great.⁷ The interest on the debt has absorbed a large part of the government expenditure. Yet Italians have repurchased a large part of their national debt formerly held in other countries.

At the death of Frederick the Great in 1786, Prussia not only had

¹ Levi, *Journal of the Royal Statistical Society* (1862), vol. xxv, p. 327.

² *Ibid.*

³ Mulhall (1899), p. 268.

⁴ Baxter (1871), p. 58.

⁵ Mulhall (1899), p. 268.

⁶ *Encyclopædia Britannica* (11th ed., 1911), vol. xv, p. 23.

⁷ Bastable (1895), p. 603.

no national debt, but had about \$52,500,000 in the government vaults at Berlin, which money afterwards was used in the wars against Napoleon I.¹ In 1800, the capital of Germany the debt, according to Baxter, was only about \$25,200,000. By 1820, however, on account of the Napoleonic wars, it had risen to about \$148,800,000. This debt weighed heavily upon a nation of 10,000,000 to 11,000,000 people ruined by invasions and warfare. Yet in 1842, nearly \$48,000,000 had been paid off, and the debt was reduced to about \$100,800,000.² This was done through the sale of public property and through taxation. In 1848, the interest charge was only about \$3,120,000.³

After the Revolutions of 1848, a series of deficits took place which increased the debt rapidly. Between 1850 and 1864 a number of loans were contracted for military preparations and for the construction of great lines of railway. These loans brought the debt in 1866 to about \$201,600,000. The war with Austria brought the debt in 1870 to about \$272,160,000, to which should be added the debts of the States annexed in 1866, amounting to about \$46,560,000 — making a total debt for Prussia and annexed States in 1870 of about \$318,720,000.⁴ The total debt of the German Empire and States in 1870 has been given by Baxter as follows: —

Prussia and annexed States	\$318,720,000
Remaining North German States	137,760,000
South German States	236,160,000
German Confederate loans of 1867 and July and December, 1870	127,680,000
Total capital debt, German Empire and States, 1870, about	\$820,320,000

Of this total capital, about \$327,912,000 represented expenditures for railways and public works, so that the unremunerative debt was only about \$492,408,000. The total interest of the debt in 1870 was about \$35,232,000. To take care of this charge, the German States had the net receipts of their railways and the produce of the public mines and iron works, which in Prussia, Saxony, and other States balanced the interest of the debts.⁵ The accom-

¹ *Tenth Census*, vol. VII, p. 277.

² Bastable (1895), p. 604.

³ *Ibid.*, pp. 39-40.

⁴ Baxter (1871), p. 38.

⁵ Baxter (1871), pp. 38-39.

54 AMERICAN AND FOREIGN INVESTMENT BONDS

panying table¹ shows the debts of Prussia and of the principal German States combined, including Prussia, for 1881, 1891, 1901, 1908, and 1912.

DEBTS OF THIRTEEN GERMAN STATES

	1881	1891	1901	1908	1912
Prussia.....	\$463,740,000	\$1,376,824,000	\$1,558,072,000	\$1,879,268,000	\$2,225,214,264
Twelve other states	760,864,000	791,780,000	981,524,000	1,236,168,000	1,471,498,046
Total.....	\$1,224,604,000	\$2,168,604,000	\$2,539,596,000	\$3,115,436,000	\$3,696,642,310

\$1.00 = 50 pence English
1 mark = 11.8 pence English

Owing to the fact that such a large proportion of the debts of the German States is for productive purposes, these debts have been a very slight, if any, burden on the States. We have called attention to this fact in estimating the burden of debt earlier in this chapter. Baxter has estimated percentage of debt charge to national income for Prussia and the German States, 1815-20, at 1.3%; for Prussia and Germany, 1837-43, at .6%.² If we deduct from the debts of the German States the value of the railways, the burden of the debt in 1912 will prove very slight.

The imperial debt, however, is much more a dead-weight debt. It has been created largely for military purposes. In 1881, the debt of the Empire was only about \$63,200,800; in 1891, it had risen to about \$311,000,800; and in 1908, to about \$1,003,826,000. Between 1881 and 1908, the imperial debt has been multiplied more than fifteen times.³ The expedition to China, the wars in Southwest Africa, and the construction of the Kaiser-Wilhelm (Kiel) Canal were responsible for an increase of about \$195,408,000 in the imperial debt.⁴ By far the largest single item added to the debt on behalf of all the States of the Empire is that for the imperial army and the next largest item for the imperial navy.⁵ In addition to the funded debt of the Empire, there is a considerable floating debt consisting of long-term and short-term Treasury issues. The first

¹ Hirst, p. 67, and *Statistisches Jahrbuch* (Berlin, 1913), p. 346.

² Baxter (1871), pp. 89-91.

³ Hirst, p. 56.

⁴ *Ibid.*, p. 57.

⁵ *Ibid.*, p. 58.

class increased greatly between 1898 and 1908.¹ The debt charge² of the German imperial debt was estimated by Baxter for 1868-70 at about 1% of national income. Our figure for the Empire in 1912 is .55%, and for the Empire and States combined, 2.13%.

It can be seen that the debt burden of the German States and of the German Empire throughout their history has been comparatively slight.³ The record of good faith and of debt payment also has been in both cases excellent. The great European war will put the German people, however, to a test of a severity never before experienced or even probably clearly conceived. The credit of Prussia and of the German Empire during recent years has corresponded very closely.⁴ It reached its highest point since 1873 in April, 1903, when Prussian 3½% consols sold to yield a net income of about 3.48%.

The Japanese debt, like that of the German Empire, is a matter of comparatively recent history. When the fiefs were surrendered to the sovereign at the beginning of the Meiji Era (1867), it was decided to provide for the feudal nobles ^{Japan} and the Samurai by the payment of lump sums in commutation or by giving to them public bonds. On this account there were issued \$93,835,000 of bonds. This was the foundation of the Japanese national debt. It represented the bulk of the State's liabilities during the first twenty-five years of the Meiji period. There were issued also \$10,535,000 bonds in part payment for the debts of the fiefs. The Satsuma Revolt in 1877 was responsible for a loan of \$7,350,000. Other loans were raised as follows: For public works, \$16,170,000; \$6,370,000 for naval construction, and \$7,105,000 in connection with fiat currency — making a total of \$149,450,000. This represented the whole national debt of Japan for the first twenty-eight years of her new era under imperial administration.⁵

The war with China (1894-95) caused a large increase in the Japanese debt. The direct expenditures on account of the war were

¹ Hirst, p. 63.

² Baxter takes the debt charge exclusive of sinking fund and surpluses applicable to a reduction of the debt. (1871), p. 44.

³ Imperial taxation per head, however, almost quadrupled in the thirty-six years between 1872 and 1908, having risen from about \$1.42 to about \$5.19. (Hirst, p. 52.)

⁴ Hirst, p. 69.

⁵ *Encyclopædia Britannica* (11th ed., 1911), vol. xv, p. 218.

about \$98,000,000, of which about \$66,150,000 were added to the national debt. Following the war there was begun a large programme of armaments and public works. The expenditures for the unproductive purposes, including coast fortifications, dock-yards, and similar works, came to \$153,860,000. The total for productive expenditures — \$93,100,000 — was made up partly as follows: For railways, telegraphs, and telephones, \$58,800,000; \$9,800,000 for riparian improvements; and \$9,800,000 in aid of industrial and agricultural banks and similar enterprises. The whole programme, which, with trifling exceptions, was to be in operation by 1905, involved an outlay of \$246,960,000. Of this the Chinese indemnity, the surplus of the annual revenue, and other assets furnished about \$147,000,000. It was the intention to raise the remaining \$99,960,000 through domestic loans. It was found impossible to obtain the money necessary at home without paying an excessive rate of interest. In 1899, a loan of about \$48,000,000 at 4% was obtained in London. These bonds were sold at 90. In 1902, all Japanese domestic loans were on a uniform basis. They carried 5% interest, ran for five years without redemption, and were then to be redeemed within fifty years at the latest. The redemption was to be by purchasing the stock in the open market or by drawing lots. It was expected that the national debt would reach its maximum — \$281,750,000 — in 1903.¹

The war with Russia, however, upset these calculations. Peace came in the autumn of 1905. Japan had been obliged to borrow \$198,450,000 at home and \$516,460,000 abroad. In 1908, the total debt amounted to \$1,115,240,000. Of this, \$543,900,000 was domestic debt and \$571,340,000 represented foreign borrowings. The debt had grown from \$274,890,000 in 1904 to \$1,115,240,000 in 1908, or from \$5.54 per head in 1904 to \$21.46 per head in 1908. The debt carried interest of from 4% to 5%.² Soon after the war with Russia, seventeen private railways were nationalized at a cost of \$245,000,000. This brought the state debt to \$1,360,240,000 in all. In 1908, a scheme was adopted for appropriating at least \$24,500,000 annually for the purpose of redeeming the debt.³ Owing to the undeveloped character of her resources and to the more

¹ *Encyclopædia Britannica* (11th ed., 1911), vol. xv, pp. 218-19.

² *Ibid.* p. 219.

³ *Ibid.*

or less confused condition of her finances, the debt incurred during the war with Russia has been a very heavy burden upon Japan. With her expansion in Korea and China, however, provided she keeps out of further wars for some time, Japan probably will be able to take care of this debt without serious trouble. The present great war, in which Japan has been a participant, has added only moderately to her financial burdens.

We have dealt at greater or less length with the debt histories of the nations which to-day are considered the great Powers. We have traced also in a general way the origin and development of national debts in Europe and America. Summary of
national
debt history We have referred also to the epidemic of borrowing which broke out in the second half of the nineteenth century and which did not subside until all the South European states, such as Spain, Portugal, and Italy, and the Spanish and Portuguese states of South America, had entered the money market. Some nations borrowed for war, others for railways — but all borrowed. Between 1848 and 1873, the debts of the defaulting states of Spain and her colonies tripled. They probably stopped even at this figure only from the impossibility of further borrowing.¹ In discussing this situation in 1874, Dudley Baxter divided the nations of the world in debt matters into the following four classes:

- (1) Economical states, whose debts grow less in proportion to their resources.
- (2) Vigorous borrowing states, that borrow freely but not beyond their resources.
- (3) Over-borrowing and declining states, whose debts are heavy and continually increase more rapidly than their resources.
- (4) Defaulting or insolvent states.

In the first class — that is, the economical states — Baxter at that time placed the United Kingdom, Denmark, Holland, Belgium, the German States, the British Colonies and Sweden;² in the class of defaulting or insolvent states he listed Spain, Greece, Ecuador, Mexico, Venezuela, San Domingo, and Honduras. Baxter spoke of zones of credit around the center of good credit,

¹ *Journal of the Royal Statistical Society* (1874), vol. XXXVII, p. 8.

² He does not include the United States, which was then struggling to pay off its great Civil War debt.

London. He referred to the countries of low interest as being all in the North and all Teutonic, such as England, Denmark, Holland, Germany, and Sweden.¹ These observations have an interesting bearing to-day.

Principal loans
in default,
1877-1914, as
listed by the
Corporation
of Foreign
Bondholders

The accompanying table (page 59) shows the amount of loans of independent governments listed by the Council of the Corporation of Foreign Bondholders as being in default as to principal at various periods between 1877 and 1912.

The figures for 1912 show only Guatemala and Honduras in default as to the principal of their loans. Since 1912, however, Mexico again has joined the list of defaulting states with an approximate amount of principal in default of \$170,531,102.²

Perhaps, as bearing on credit, more important even than the record of good faith is what may be called the general standing of a nation in the civilized world. This factor, indeed, more than any other, may be said to determine national credit at any given time. How do the great nations of the world stand to-day? What are the forms of their governments, the nature of their institutions, the character of their people, and their military and economic positions? Are they developing or are they declining, or, as we sometimes say, are they "coming" or "going"?

General
standing of a
nation the
most important
factor in credit

We have indicated earlier in this chapter the nature of the institutions of the United States. Its government, of course, is that of a federal republic of independent or balanced powers, legislative, executive, and judicial. In the early days of the Republic, public opinion was formed largely through the exchange of views among a few leading men. Actually the government was aristocratic rather than democratic. After the people of the Eastern States crossed the Allegheny Mountains, however, and settled the West, actual democracy under the conditions of frontier life developed rapidly. From the time of Andrew Jackson until the present, popular government or government controlled by the will of the great mass of the people

Forms of
government
and institu-
tions of the
great powers —
United States

¹ *Journal of the Royal Statistical Society* (March, 1874), vol. XXXVII, pp. 2-13.

² Council of the Corporation of Foreign Bondholders, *Forty-First Annual General Report*, p. 369.

LOANS OF INDEPENDENT GOVERNMENTS IN DEFAULT

	1877 ¹	1887-1888 ²	1892-1893 ³	1901-1902 ⁴	1907 ⁵	1912 ⁶
Bolivia.....	\$7,939,200	—	—	—	—	—
Colombia.....	15,859,200	\$9,184,800	\$9,184,800	\$12,060,000	—	—
Costa Rica.....	8,755,200	—	—	9,600,000	\$9,600,000	—
Ecuador.....	11,520,000	8,755,200	—	—	—	—
Greece.....	2,602,560	2,640,960	—	7,117,440	7,117,440	\$7,117,440
Guatemala.....	25,913,136	25,913,136	25,913,136	25,913,136	25,913,136	25,913,136
Honduras.....	480,000	480,000	480,000	—	—	—
Liberia.....	133,947,840	—	—	—	—	—
Mexico.....	7,225,920	—	—	—	—	—
Paraguay.....	158,174,400	152,850,048	—	—	—	—
Peru.....	3,428,640	3,428,640	—	18,649,680	—	—
Santo Domingo.....	947,473,176	—	—	—	—	—
Turkey.....	15,191,040	—	—	—	—	—
Uruguay.....	31,700,640	—	—	21,941,602	—	—
Venezuela.....						

Reduced from pounds sterling (£1 = \$4.86).

¹ Council of the Corporation of Foreign Bondholders, *Fewell's Annual General Report* (London, 1877), table after p. 63.

² *Fifteenth Annual General Report* (1888), p. 201.

³ *Twentieth Annual General Report* (1893), p. 202. There was also in default a large amount of Argentine provincial loans (\$106,563,560) and a large amount of municipal loans and provincial cedulas.

⁴ *Twenty-Ninth Annual General Report* (1902), p. 456.

⁵ *Thirty-Fourth Annual General Report* (1907), p. 459.

⁶ *Thirty-Ninth Annual General Report* (1912), p. 399.

has grown steadily.¹ To-day public opinion, instead of being formed from the top downwards, is formed through newspapers and otherwise from the bottom upward to the highest officials of the Government. This, in our opinion, is a great factor in national safety and in national credit. It means that back of any important move on the part of the American Government is the opinion of a majority, if not practically all, of the American people.

Much the same situation prevails in England — though the actual form of the Government is that of a constitutional monarchy with a ministry responsible to the House of Commons.

Great Britain

The Reform Bill of 1832 represented the spread of the democratic idea in England. The Government of England before that time had been a Government largely of country squires. With the growth of manufacturing and of the cities and with the repeal of the Corn Laws, there developed a democracy based on industrialism. Great impetus has been given to the democratic movement in England during the past ten years.

The Government in France is a curious compromise between the English and the American systems. The French Government of to-day is more or less of a makeshift. It grew out of

France

the critical necessities of the French people after their defeat by Prussia in 1871. Its efficiency remains to be proved. The paternal nature of the Government, the centralization of power, and the system of administrative courts, by which the acts of the Government are dealt with under a different system of law from that of the acts of individuals — all are unfamiliar to the Anglo-Saxon mind. In the Chamber of Deputies there exist a large number of groups of various shades of opinion instead of the two parties with which Englishmen and Americans are familiar. President Lowell makes the point that since the Third Republic there have been frequent changes in ministries, but no real changes in the party in control of the Government.² Incoherent as the French government sometimes seems, it has this one great underlying virtue: it derives its authority from the people.

The Government of Italy is that of a constitutional monarchy

¹ See E. L. Godkin, *Unforeseen Tendencies of Democracy* (Boston and New York, 1898), pp. 1-47 and 183-225.

² A. Lawrence Lowell, *The Governments of France, Italy, and Germany* (Cambridge, 1914), p. 114.

with a parliamentary system. The ministers are responsible to the popular House. Owing to the system of groups, however, rather than parties, — which we have spoken of in connection with France, — the parliamentary system in Italy does not work with anything like the smoothness and precision that it does in England. The power of the King sometimes is considerable.¹

The Government of Germany, unlike that of the others so far mentioned, instead of being democratic in its general character, is aristocratic and autocratic. There is, of course, a popular house, the Reichstag, but the real power in Germany the government of the Empire and in practically all matters of common interest of the various German States is exercised by the Bundesrath or Federal Council — “that extraordinary mixture of legislative chamber, executive council, court of appeal, and permanent assembly of diplomats.”² The Bundesrath is composed of delegates appointed by the princes of the States and the senates of the Free Cities.³ Owing to the position of Prussia in the Bundesrath and in the Empire, the German Emperor as King of Prussia is in a position to control pretty largely the affairs of the Empire. There is lacking any effective method of bringing to bear the force of public opinion in matters of government. In Germany as in France, moreover, there exists an extreme centralization and paternalism. This is carried sometimes to the smallest matters in the daily lives of the people.⁴ Suppression of newspapers and of public meetings for expressing sentiments contrary to the opinions of those high in authority has been common.⁵ Price Collier has referred to the conditions in Germany as “the governing of the people by suppression and strangulation.”⁶ All this has been done in the name of efficiency. There is, in a broad way, an ominous similarity between the relation of the German people to their Government at present and that of the French people to their Government before the French Revolution.⁷ The German people have a splendid record

¹ Lowell, pp. 125-27.

² *Ibid.*, p. 191.

³ *Ibid.*

⁴ Price Collier, *Germany and the Germans* (New York, 1914), p. 399.

⁵ *Ibid.*, pp. 163-65.

⁶ *Ibid.*, p. 498.

⁷ For the alternative of revolution under an extreme development of the protective system, see Buckle's remarks on Spain, *History of Civilisation* (New York, 1861), vol. II, pp. 123-24.

for the payment of their debts; but what will be their attitude if they find themselves saddled with a debt of unprecedented and almost unimagined size, incurred for a purpose which has proved fruitless of results, disastrous to their economic and financial condition, and unfortunate in its effect on the relations of the German people with the people of other nations?

The Government of Austria-Hungary is that of a constitutional Empire composed of two autonomous kingdoms — Austria and Hungary. Each retains a large measure of independence. The personal power of the present Emperor, Francis Joseph I, has been great. The bond between Austria and Hungary, however, with their many divergent and sometimes antagonistic races, is at best a weak one. If the present war should have an unfortunate outcome for Austria-Hungary, it would leave that country with its large debts in a situation which would offer very little inducement to make new loans and perhaps even make doubtful the collection of a large part of her present obligations. The very existence of Austria-Hungary as one, or even as two nations, is at present an enigma.¹

The Government of Russia still is almost entirely autocratic — though the machinery has been furnished for a later development of something like popular government. The rulers of Russia have shown a disposition to make concessions, even though small ones, to the people. It is doubtful whether the Russian people at present are fitted for a greater degree of self-government than they now possess, though there are signs of disquiet and discontent with present conditions. Many agrarian and economic problems remain to be worked out, and the great natural resources of Russia remain to be developed. Progress toward popular government in Russia will be either through concessions granted by the Czars and the governing class or by revolution. There is nothing at the moment, as far as the relations of the people to their Government go, which would lead one to fear for the payment of their national debt.

The Government of the only other country under special consideration — that of Japan — is a constitutional monarchy with a

¹ For the system of government in Austria-Hungary, see *Encyclopædia Britannica* (11th ed., 1911), vol. III, p. 2.

large amount of power in times of crisis or of great importance in the hands of a small group of men known as the Elder Statesmen. The Ministers of State or the Cabinet are appointed by the Emperor and are responsible to him ^{Japan.} alone.¹ There is a diet of two houses. The Government seems to work reasonably well.

The character of the population has an important bearing on credit. The population of the United States is, on the whole, better than that of any other great civilized nation. It has ^{Character of the population} vigor and ability, resourcefulness, knowledge, and general individual efficiency of a high order. During the past one hundred years the population of Great Britain has been much the same. The English-speaking race as a whole has been during that time the most remarkable of all the races of the world. The population of France and Germany is highly intelligent and efficient. That of Russia, while vigorous and patient, is lacking in resourcefulness and adaptability. It is what may be called relatively undeveloped. It was not until 1863 that serfdom was completely abolished.² The population of Austria-Hungary is the least homogeneous of all the nations under consideration. Germans, Magyars, Serbs, Czechs, Poles, and Croats live under one scepter in a condition sometimes bordering on anarchy. The people of Japan are notably homogeneous and have shown a remarkable adaptability to modern ideas and methods. In the matter of education or literacy, Germany, the United States, and Great Britain make the best showing, and Russia, Hungary, Italy, and Japan ³ the poorest.⁴ Illiteracy or ignorance is a bad companion for financial responsibility, though the two sometimes are found together. The character of the population of many Central and South American countries probably is the main reason not only for the instability of their governments, but for their relatively low credit.

¹ *Encyclopædia Britannica* (11th ed., 1911), vol. xv, p. 203.

² Ploetz, p. 500.

³ Elementary education in Japan is now, however, compulsory. (*Statesman's Year-Book* [1915], p. 1091.)

⁴ Mulhall (1899), p. 231. Webb (1911), p. 219. *Statesman's Year-Book* (1915), *passim*. In some parts of Russia, illiteracy is over 50%; in Hungary it is between 40% and 45%; and in Italy between about 33% and about 49% as against 7.7% in 1910 for the United States. (*Statesman's Year-Book* (1915), pp. 434, 700, 1060 and 1281.)

Another important factor in credit is the military standing of a nation. History has shown that no nation that is not in a condition of actual or potential military efficiency long continues to have good credit. A striking illustration is that of China with its immense population and wealth and its record of good faith. The inability or unwillingness of China to defend itself has kept its credit at a relatively low point. Germany, France, Russia, Austria-Hungary, Italy, and the Balkan countries all have adopted the policy of universal liability to military service.¹ The United States and Great Britain have followed the policy of maintaining small standing armies and depending on volunteers in time of war. If all countries adopt the plan of universal military service, it will lose its value for any one country; if all finally renounce it, all countries will be equal in this respect and will have the advantage of being able to use their resources for productive purposes. At the same time, ability and willingness to fight when necessary are absolutely essential under any conditions known to human history for the continuance of successful national existence. Without the ability to defend its territory, population, and resources, a nation has the least secure of all foundations for national credit. In this respect the United States, with its enormous resources, its attempted maintenance of the Monroe Doctrine, and its participation in the affairs of the Old World, is in a weak position at the moment.² At the same time it is only fair to say that the United States, no less than the other great nations of the world, — Great Britain, France, Germany, Italy, Austria-Hungary, Russia, and Japan, — may be called actually or potentially a first-class military nation.

Another important consideration in determining national credit is the economic situation. This may be said to embrace the position of a country in regard to farming and to its food supplies, its position as to manufacturing and its position as to internal and foreign commerce. That country which comes the nearest to economic self-sufficiency is in the safest position and has, other things being equal, the best basis for good

¹ *Statist* (London), vol. LXXXI, p. 350.

² Steps are being taken to remedy this condition. (See *Commercial and Financial Chronicle*, vol. 101, p. 337.)

credit. Of the nations under discussion, probably the United States and Russia come the nearest to complete economic self-sufficiency. In this respect, however, the position of the United States is immeasurably better than that of Russia. The United States produces within its own continental borders almost everything it needs, not only in the way of food supplies, but in raw materials for its enormous and constantly increasing industries. Great Britain is in the weakest position in this respect. She is obliged to import from three quarters to four fifths of her food and a large part of her raw materials.¹ France, owing to its system of intensive farming, usually imports only a moderate amount of food. Germany, Austria-Hungary, Italy, and Japan all have a considerable degree of economic self-sufficiency. The great manufacturing, foreign commerce, shipping, and banking of Great Britain, protected by her navy, in her case have removed farming as a factor of any significance. On account of being, however, absolutely dependent on her navy even for her food supplies, Great Britain is in a more precarious position than some of the other countries under consideration. Throughout the nineteenth century and the opening years of the twentieth, there has been a constantly increasing development of the great nations of the world in manufacturing or industry at the expense of farming. Great Britain, France, and Germany particularly have developed their manufactures and increased their foreign trade with the other nations of the world. They have purchased food or raw materials from the younger and less developed countries, such as the United States,² Russia, and Argentina, and have sold them their finished products, such as cotton and woolen goods, iron and steel manufactures, and many other articles required. They have also loaned largely of their accumulated capital to the countries which were in a position to furnish them with food or raw materials. The extraordinary development of the United States during the past fifty years has been possible largely through obtaining capital from Europe — especially England. Russia has been financed for many years largely by France.³

¹ See the *Statist*, vol. LXXXI, p. 533.

² Of recent years the United States, while still an enormous producer of food and raw materials, is coming to be more and more a manufacturing or industrial nation.

³ For an interesting discussion of this subject, see Sir George Paish in the *Statist*, vol. LXXXI, p. 463.

The trade or commerce of a nation shows in a broad way its economic position. The domestic trade of the United States is many times greater than its foreign trade. The Bureau of Statistics, Department of Commerce, has estimated our domestic commerce in 1911 at \$33,000,000,000, or nearly ten times our foreign trade for the same year. The same authority has estimated our domestic commerce in 1914 at \$40,000,000,¹ made up as follows:—

Manufactures	\$24,000,000,000
Agricultural products	10,000,000,000
Mineral products	2,500,000,000
Fisheries	500,000,000
Value added to all this by transportation	1,000,000,000
Imports	2,000,000,000
	<hr/>
	\$40,000,000,000

This huge total largely has made possible annual savings estimated at \$6,720,000,000 a year.² It shows on how broad and firm a basis the credit of the United States rests. In a broad way, the trade position of a nation is not merely the domestic or the foreign commerce in merchandise, or both together, but rather the position as debtor or creditor *in toto*. In other words, we must examine the position of a nation not only as to its domestic commerce and its merchandise imports and exports, but also as to whether it is a debtor or creditor in the matter of interest on securities, whether it receives a large portion of the freight charges in international trade, whether it receives an excess of banking or other commissions, and other similar considerations.

We give below table showing merchandise imports and exports, excess of either, and total foreign trade of the principal commercial nations of the world for the year ending December 31, 1912. We take this year in order to show fairly normal conditions and in order to correlate the figures with our figures of estimated resources and debt.

¹ This compares with only \$7,000,000,000 as the internal commerce of the United States in 1870. (From address of O. P. Austin, chief of the former Bureau of Statistics, Department of Commerce, enclosed with letter from Department, May 20, 1915.)

² *Statist*, vol. LXXXI, p. 608.

FOREIGN TRADE

	<i>Imports</i>	<i>Exports</i>	<i>Excess of imports</i>	<i>Excess of exports</i>	<i>Total foreign trade</i>
Great Britain and Ireland ¹	\$3,037,934,400 ²	\$2,338,670,400 ³	\$699,264,000		\$5,376,604,800
Germany (Customs Union) ⁷	2,523,360,000 ⁸	2,113,920,000 ⁹	409,440,000		4,637,280,000
United States ⁴	1,818,133,355 ⁵	2,399,217,993 ⁶		\$581,084,638	4,217,351,348
France ¹⁰	1,580,313,600 ¹¹	1,288,819,200 ¹²	291,494,400		2,869,132,800
Russian Empire ¹¹	593,697,600 ¹³	769,526,400 ¹⁴		175,828,800	1,363,224,000
Austria-Hungary ¹²	711,360,000 ¹⁵	546,768,000 ¹⁶	164,592,000		1,258,128,000
Italy ¹³	710,769,600 ¹⁷	460,209,600 ¹⁸	250,560,000		1,170,979,200
Japan ¹⁴	303,307,200 ¹⁹	258,220,800 ²⁰	45,086,400		561,528,000

¹ *Statistical Abstract for Foreign Countries*, no. 39 (London, 1914), p. 111. The grand total of foreign and inter-imperial trade of the British Empire in 1913 is given as about \$9,745,368,000. (*Statistical Abstract for the British Empire*, no. 10 [London, 1914], pp. 5-6.)

² "Net," i.e., total imports less re-exports.

³ Statement from Department of Commerce, Bureau of Foreign and Domestic Commerce, Washington, June 18, 1913.

⁴ Total.

⁵ *Statistical Abstract for Foreign Countries*, no. 39 (London, 1914), p. 100.

⁶ Of domestic produce.

⁷ *Ibid.*, p. 99.

⁸ *Ibid.*, p. 107.

⁹ "General Trade," or totals.

¹⁰ For home consumption.

¹¹ *Statistical Abstract for Foreign Countries*, no. 39 (London, 1914), p. 104.

¹² *Ibid.*, p. 108.

¹³ *Ibid.*, p. 110.

¹⁴ Domestic.

¹⁵ For home consumption.

¹⁶ *Statistical Abstract for Foreign Countries*, no. 39 (London, 1914), p. 104.

¹⁷ *Ibid.*, p. 108.

¹⁸ *Ibid.*, p. 110.

¹⁹ Domestic.

²⁰ For home consumption.

²¹ *Statistical Abstract for Foreign Countries*, no. 39 (London, 1914), p. 104.

²² *Ibid.*, p. 108.

²³ *Ibid.*, p. 110.

²⁴ Domestic.

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²⁶ *Statistical Abstract for Foreign Countries*, no. 39 (London, 1914), p. 104.

²⁷ *Ibid.*, p. 108.

²⁸ *Ibid.*, p. 110.

²⁹ Domestic.

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³¹ *Statistical Abstract for Foreign Countries*, no. 39 (London, 1914), p. 104.

³² *Ibid.*, p. 108.

³³ *Ibid.*, p. 110.

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⁴⁸ *Ibid.*, p. 110.

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⁵⁸ *Ibid.*, p. 110.

⁵⁹ Domestic.

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⁶² *Ibid.*, p. 108.

⁶³ *Ibid.*, p. 110.

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⁶⁸ *Ibid.*, p. 110.

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⁷² *Ibid.*, p. 108.

⁷³ *Ibid.*, p. 110.

⁷⁴ Domestic.

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⁷⁷ *Ibid.*, p. 108.

⁷⁸ *Ibid.*, p. 110.

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⁸¹ *Statistical Abstract for Foreign Countries*, no. 39 (London, 1914), p. 104.

⁸² *Ibid.*, p. 108.

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¹¹⁹ Domestic.

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¹²² *Ibid.*, p. 108.

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¹²⁸ *Ibid.*, p. 110.

¹²⁹ Domestic.

¹³⁰ For home consumption.

¹³¹ *Statistical Abstract for Foreign Countries*, no. 39 (London, 1914), p. 104.

¹³² *Ibid.*, p. 108.

¹³³ *Ibid.*, p. 110.

¹³⁴ Domestic.

¹³⁵ For home consumption.

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¹³⁷ *Ibid.*, p. 108.

¹³⁸ *Ibid.*, p. 110.

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¹⁵⁸ *Ibid.*, p. 110.

¹⁵⁹ Domestic.

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¹⁶³ *Ibid.*, p. 110.

¹⁶⁴ Domestic.

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¹⁶⁸ *Ibid.*, p. 110.

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¹⁷⁸ *Ibid.*, p. 110.

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¹⁸⁸ *Ibid.*, p. 110.

¹⁸⁹ Domestic.

¹⁹⁰ For home consumption.

¹⁹¹ *Statistical Abstract for Foreign Countries*, no. 39 (London, 1914), p. 104.

¹⁹² *Ibid.*, p. 108.

¹⁹³ *Ibid.*, p. 110.

¹⁹⁴ Domestic.

¹⁹⁵ For home consumption.

¹⁹⁶ *Statistical Abstract for Foreign Countries*, no. 39 (London, 1914), p. 104.

¹⁹⁷ *Ibid.*, p. 108.

¹⁹⁸

On a merchandise basis, of recent years at any rate, the United States and Russia are the only great nations that have shown a normal excess of exports over imports. In other words, not only Great Britain, France, and Germany, but also Austria-Hungary, Italy, and Japan have shown of recent years an excess of imports over exports.¹

On the other hand, the United States and Russia have been heavy annual debtors in the matter of interest on securities, whereas Great Britain, France, Holland, and probably Germany have been creditors in this respect. The United States has been a heavy debtor also in the matters of freights, commissions, money sent abroad by immigrants, and taken abroad by travelers — in fact, in almost every item which enters into what is called the “invisible trade balance.” Great Britain, on the other hand, has been a creditor in all or almost all these respects. She has had a surplus fund invested in securities all over the world. She has done a very large percentage of the carrying trade of the world and a very large proportion of its banking business.² In other words, while the merchandise foreign trade of the United States has appeared to show her the largest creditor and that of Great Britain has appeared to show her the largest debtor, the factors in the invisible trade balance have resulted in a situation actually very different. Great Britain and the United States offer the two most striking examples of the interplay of foreign commerce and the invisible items of the trade balance. Sir George Paish has estimated Great Britain’s capital investments in foreign and colonial countries as about \$15,000,000,000.³ He has estimated more recently that Great Britain receives from colonial and foreign nations a total income of about \$1,680,000,000 a year. On the basis of a difference between merchandise imports and exports of, say,

¹ *Statistical Abstract for Foreign Countries* (London, 1914), pp. 99–111.

² Until recently practically every transaction in American foreign exchange amounting to \$100,000 or over has gone, the writer has been told, through London.

³ He gives (reduced from pounds sterling at the rate of \$4.80 to the pound): —

Total investments in Colonies, India, and foreign countries	\$15,320,812,800
Investments in British Colonies and India	\$7,459,929,600
Investments in foreign countries	7,860,883,200
Capital investments exceeding £50,000,000 (\$240,000,000): —	
In the United States	\$3,302,774,400
In Argentina	1,205,078,400
In Brazil	453,312,000
In Mexico	419,203,300
In Japan	257,784,000

(*Journal of the Royal Statistical Society*, January, 1911, p. 186.)

\$625,000,000, Great Britain is able to purchase something like \$1,000,000,000 a year of securities from abroad.¹ The amount of European capital invested in what may be called permanent securities in the United States before the war has been estimated by the National City Bank of New York — taking into consideration the figures of Sir George Paish in 1910, the recent figures of Mr. L. F. Loree for railroads, and the recent figures of the New York Clearing-House for industrials — at between \$5,000,000,000 and \$6,500,000,000.² The net payments by the United States to other countries of items entering into the invisible trade balance have been somewhat as follows: —

Net interest on foreign capital	\$250,000,000
Net balance of expenditure of American citizens in other lands	170,000,000
Net remittances of foreign-born citizens to friends in Europe and elsewhere . . .	150,000,000
Net sum paid to other countries for ocean freights	25,000,000
Total of items owed on the invisible trade balance	\$595,000,000 ³

This accounts in a general way for the normal excess of merchandise exports over imports shown by the United States. All foreign trade must be settled finally with merchandise, services, or gold. At any given time, however, the import or export of capital to be set-

¹ *Statist* (London), vol. LXXXI, pp. 393-94.

² Letter of National City Bank, dated July 3, 1915. — See also *Economist* (London), July 17, 1915 (vol. LXXXI), p. 84. The amount of American securities held abroad necessarily is a matter of opinion.

³ *Trade Balance of the United States* (1910), p. 191. Figures of Dr. E. E. Pratt, chief of the Bureau of Foreign and Domestic Commerce, as given in an address at the annual meeting of the California Bankers' Association, San Francisco, May 27, 1915, gave the total estimated debt of the United States to Europe as \$7,000,000,000 owing principally to the following countries: —

England	\$4,000,000,000
France	1,000,000,000
Germany	1,250,000,000
Holland	650,000,000

Dr. Pratt estimated: —

Net interest on securities	\$300,000,000
Tourist expenditures	250,000,000
Remittances to friends	150,000,000
Freights	50,000,000
Total	\$750,000,000

For the fiscal year ending June 30, 1914, Dr. Pratt estimated that we had to make payments to Europe amounting to \$55,000,000 more than the total amount of merchandise exported.

tled with securities may play a large part. The great lending countries have been Great Britain, France, Holland, Germany, Belgium, and Switzerland. Of these countries Great Britain has been by far the most important lender, with, as stated above, foreign investments in the neighborhood of \$15,000,000,000. Germany and France come next with investments of, say, about \$8,000,000,000 each.¹ The investments of Holland, Belgium, and Switzerland are of much smaller amount, but are nevertheless considerable. The merchandise imports of all these five countries largely exceed their exports in consequence of receipt of interest and of tourist expenditures. In the case of Great Britain, excess is paid for further by the earnings of British ships, the tonnage of which forms such a large part of the world's international shipping facilities.² A large excess of merchandise imports over exports usually indicates that a country is in a position to receive a large amount of interest on capital invested in other countries; a large excess of exports over imports usually indicates that a country is forced to pay heavy sums in interest and dividends on its securities owned abroad. Sometimes an excess of merchandise imports over exports means the import of capital in the form of merchandise to be paid for with securities. The amount of American securities held abroad has been considerably reduced since the opening of the great war, though probably not to the extent that many accounts would lead one to believe.³

¹ These facts should be borne in mind in estimating the ability of these nations to pay for the costliest war in history.

² *Trade Balance of the United States* (1910), pp. 169-70.

³ A letter received from the National City Bank of New York, July 3, 1915, estimates the amount of American securities repurchased from abroad since the beginning of the war at between \$300,000,000 and \$500,000,000. There has also been purchased in this country a considerable amount of foreign government securities.

We give below a list of loans to foreign nations raised in the United States from the beginning of the war up to October 23, 1915:—

Russian Government acceptances.....	\$25,000,000
French Government one-year notes.....	10,000,000
French one-year 5% loan.....	50,000,000
Dominion of Canada 5% one- and two-year notes.....	40,000,000
Canadian Provincial and municipal loans.....	85,500,000
German nine-months 5% notes.....	10,000,000
Swedish Government two-year notes.....	5,000,000
Argentine National one-three-year loan.....	15,000,000
Argentine five-year 6% bonds.....	25,000,000
Norway short-term loan.....	3,000,000
Bolivian loan.....	1,000,000
Republic of Panama thirty-year 5 per cents.....	3,000,000
Swiss Government one-five-year notes.....	15,000,000
Anglo-French five-year 5% loan.....	500,000,000
Italian one-year 6% notes.....	25,000,000
Total.....	\$812,500,000

(*Statist* [London], vol. LXXXV, pp. 65 and 180.)

The United States also has purchased considerable amounts of foreign securities.

All these matters have an important bearing on the economic and financial status of a nation and therefore on its credit. The present war may change appreciably the relative rank of the great nations of the world. We will sketch briefly their situation as it appears to-day.

Situation of
the leading
nations

The United States, in the size and character of its territory and population, in the stability of its government, and in its general political, commercial, and financial strength, holds to-day an almost unique position. It has the almost unparalleled advantage of having been settled by a

Position of
the United
States

vigorous and intelligent population, possessed of all the knowledge of Europe at the time of settlement and then placed in possession of a vast territory with resources practically untouched. The development of these resources by such a population has brought the United States to its present commanding position. The opening of the Panama Canal, the new banking system, improved relations with South America, and the great war have given the United States an opportunity that comes to few nations at any time. Unless the unforeseen happens, it is even more favorable than the situation of Great Britain after the Napoleonic wars; for the United States has one great advantage which was conspicuously absent in the case of Great Britain at that time — an exceedingly small national debt. The United States, moreover, not only is now exporting an excess of merchandise of something like \$1,000,000,000 a year (June 30, 1915), — which on such a scale as this is a temporary state of affairs, — but is in a position to increase greatly its permanent or normal foreign trade. This is often the forerunner of a commanding financial position.¹ The weak point in the economic situation of the United States is the lack of an adequate merchant marine. This should be remedied. With her enormous farming and manufacturing interests, — greater than those of any other country, — the United States is in a fair way to become the leading commercial and financial nation of the world. From almost any angle that one looks at it, this country is entitled to credit as high as that of any nation in the world.

¹ See George J. Goschen, *The Theory of the Foreign Exchanges* (London, 1896), pp. 32-35.

During the past one hundred years, Great Britain has been considered, on the whole, the leading civilized nation in the world.

Great Britain After the Seven Years' War in Europe and the French-and-Indian War in America, England became predominant in the New World. By the final defeat of Napoleon, she established herself as the first nation in Europe. In a broad way this is the reason why British consols have sold for most of this period higher than the bonds of any other Government. As indicated earlier, however, the economic and political position of Great Britain to-day is by no means secure. On account of being absolutely dependent on her navy for the maintenance of her great position in the world, Great Britain is in a precarious and at times dangerous position. A serious impairment of her naval power might lead to the breaking-up of the British Empire as at present composed. The English-speaking, self-governing dominions, such as Canada, Australia, and South Africa, probably would grow in power and might remain strongly attached by ties of affection to the mother country; but the center of gravity of the Empire would be shifted.

France in the early part of the eighteenth century was the first nation in Europe. In population, wealth, power, and prestige she clearly led all other nations. The long revolutionary wars of France, however, and her final defeat by the Allies left her greatly weakened. She never again recovered her leading position; but in the thirty or forty years preceding the war of 1870 she showed a notable expansion in industry and wealth. With the halting of her own development after the war with Prussia, France became one of the principal lending nations of Europe. The French people have been exceedingly saving, and have not only made possible the wide distribution of French rentes in France, but the lending of large sums to Russia and other foreign countries. Since 1870, France has succeeded in building up a very respectable Colonial empire.

Germany has shown an extraordinary growth in population and wealth during the past forty years. She has not only made herself the strongest single military power in Europe, but has developed her industries and her foreign trade to a point which threatened the supremacy of England. This extraor-

Germany

dinary development made necessary also efforts toward outside expansion. The pressure of population in Germany probably has been greater than anywhere else, except possibly in Japan.¹ Germany's burdens for military preparation have been great. Her colossal policies of expansion by force — sometimes described as Pan-Germanism² — have placed her in a precarious position. During the present war, she has not only increased enormously the burden of her debts, but has alienated to a large extent the friendship of the rest of the world. This cannot but react unfavorably on her credit.

Italy and Austria-Hungary are relatively poor countries with heavy burdens of taxation and heavy debts. The financial condition of each at many times has been precarious.³ Italy is making strenuous efforts to extend her boundaries at the expense of Austria — particularly in what are called "the unredeemed provinces," which include Trent and a portion of the eastern shores of the Adriatic. Russia is a country continental in area with by far the largest population of all the great powers. The resources of the country, however, are largely undeveloped, the railways are comparatively few, and the general economic and financial condition leaves great room for improvement. Her army has been to her a considerable burden.⁴ Owing to her great resources, even though they are now undeveloped, Russia probably will be able to take care of her debts. Japan is a country in which the best part of the population devotes itself to military pursuits. Business is regarded as a means to an end and business men as inferior to the military class. Japan has a large population for the size of its territory and the scantiness of its resources. Unless it can find and develop in Korea, and perhaps in China, a wealth that will enable it to become a rich and powerful industrial nation, "it cannot hope to satisfy its national ambitions to say nothing of its European creditors."⁵

¹ *Statistical Abstract for Foreign Countries* (London, 1914), pp. 8-11.

² According to Professor Usher, the German dream of to-day has been the establishment of an empire comprising Germany, Holland, Belgium, Denmark, Switzerland, Italy, Austria-Hungary, the Balkans, Turkey, and Asia Minor — a new world state bounded by the North Sea, the Baltic, the Persian Gulf, and the Mediterranean. (*American Review of Reviews*, November, 1914, p. 616.)

³ *Economist* (London), vol. LXXIX, p. 874, and vol. LXXX, p. 56. *Statist* (London), vol. LXXXI, pp. 158-59, 349-50, and 552.

⁴ *Statist* (London), vol. LXXXI, p. 530. ⁵ *Economist* (London), vol. LXXX, p. 672.

We have discussed in a general way the credit of the leading civilized nations of the world. We have gone into the leading factors making up their credit under what may be called normal conditions. Before discussing the bearing of the present great war on national credit, we wish to give an idea of the course of prices of some of the leading government bonds for a series of years. Since the close of the eighteenth century, the credit of Great Britain has been most of the time higher than that of any other nation. France for most of the time has held second position — though at times French credit has been strained severely. The accompanying table (on page 75) shows the highest and lowest prices by ten-year periods for a long series of years of British consols and French rentes.

An examination of these prices makes one feel that government bonds should be thought of more as one thinks of stocks — that is, as being liable to great fluctuations. In fact, the common European name for government securities is stocks. We should think of these securities, especially as there is no legal means of enforcing payment, as fluctuating with the position and prosperity of the nation almost as much as does the common stock of a railroad or an industrial concern. This may seem an extreme statement; but the record of national good faith and the fluctuation in the prices of government securities make it entirely reasonable.

Still more will this appear when we extend our investigations to the prices of government bonds other than English and French.

The accompanying table (on page 77) shows the highest and lowest prices on an income basis for ten-year periods, mostly since 1873, of United States bonds, British consols, French rentes, Prussian consols, Italian, Austrian, Russian, and Japanese bonds.

In discussing the debt histories of the individual nations, we have referred at times to the prices of their bonds. It is not always possible to correlate closely the prices of government bonds with the condition of the national finances or with historical events of favorable or unfavorable import. The effect of such matters on prices for a series of years is modified by general economic or financial conditions, by the relation between supply and demand for a country's securities, and by other considerations. It must be borne

Prices of
British con-
sols and of
French rentes

Prices of
leading gov-
ernment bonds,
1873-1912

PRICES OF BRITISH CONSOLS¹PRICES OF FRENCH RENTES²

Date	%	Highest	Lowest	Date	%	Highest	Lowest	Date	Highest	Lowest
1798 ¹	3%	58	47.25	1798-1802...	5%	68 (1801)	7 (1799)			
1813-1822...	3%	84½ (December, 1817)	53½ (June, 1816)	1803-1812...	5%	93.40 (1807)	47 (1803)			
1823-1832...	3%	97 (April, 1824)	72 (March, 1823)	1813-1822...	5%	95 (1822)	45 (1814)			
1833-1842...	3%	95½ (May, 1838)	84½ (January, 1833)	1823-1832...	5%	110.65 (1829)	74.75 (1821)			
1843-1852...	3%	102 (June, 1852)	78½ (October, 1847)	1833-1842...	5%	120.80 (1842)	90.65 (1833)			
1853-1862...	3%	101 (April, 1853)	85½ (March, 1854)	1843-1852...	5%	126.30 (1844)	50 (1848)			
1863-1872...	3%	96½ (June, 1867)	84½ (May, 1866)							
1873-1882...	3%	103 (May 24, 1881)	91½ (December, 1874)							
1883-1892...	3%	103½ (May 31, 1887)	94½ (April 14, 1885)							
1893-1902...	2½%	114 (July 1, 1896)	91 (July 15, 1901)							
1903-1912...	2½%	93½ (January 5, 1903)	72½ (October 14, 1912)							

¹ Messrs. Frederic C. Mathieson & Sons, London, England, enclosed in letters dated April 20, 1913, and May 26, 1914.

² *Boston Evening News Bureau*, June 1, 1915.

³ *Annuaire Statistique*, pp. 74* and 75*.

⁴ 2½% from April, 1903.

in mind that, aside from and before the great war, there have been certain factors during the past twelve or fifteen years which have led to an almost steady decline in the prices of all low interest-bearing securities. Among these factors may be mentioned the increase in the production of gold, the increase in the cost of living and in the scale of living, and the output of enormous amounts of securities of all kinds coincident with rapid industrial expansion and private and public extravagance. The lowest price of British consols during the past one hundred years was, however, in June, 1815, at the time of the battle of Waterloo; the highest was on July 1, 1896, at a time when England's supremacy in almost every respect was unquestioned and when there was a relatively large accumulation of capital in Europe seeking investment. The lowest price for French rentes since the close of the Napoleonic wars occurred in the troublous days of the Second Republic (1848), and the next lowest was after Sedan; the highest price was in 1897, when France and the world were at peace and capital was seeking investment all over the world. The lowest prices for United States bonds since the early days of the Republic were in the spring and early summer of 1861 at the beginning of the Civil War; the highest prices as a rule were in 1902, when the United States had greatly extended its territory as a result of the Spanish War, was in a strong economic and financial condition, and when there was a large accumulation of capital seeking investment.

It remains only to discuss, as far as it can be seen, the effect of the present great war on national credit. In number of men engaged, population and resources of nations at war, and total expenditure, the present war is in a class by itself. An early estimate of the London "Economist"¹ placed the direct total cost of this war for six months for the leading countries at about \$8,232,000,000, divided somewhat as follows: —

Germany.....	about	\$2,040,000,000
Austria-Hungary.....	"	1,440,000,000
Russia.....	"	2,040,000,000
France.....	"	1,560,000,000
Great Britain.....	"	1,152,000,000

¹ Vol. LXXX, pp. 50-51.

UNITED STATES AND FOREIGN GOVERNMENT BONDS 77

These figures were at the rate of about \$16,464,000,000 as the total direct cost of the war for the nations listed for one year. Mr. Edgar Crammond, Secretary of the Liverpool Stock Exchange, at a

PRICES OF GOVERNMENT BONDS¹

Security	Period	High	Date	Low	Date
United States					
6% 1881.....	1873-1882	1.53%	June 16, 1876	4.50%	October 17, 1873
4% 1907.....	1883-1892	2.08%	March 29, 1889	2.94%	June 23, 1884
4% 1907.....	1893-1902	1.58%	March 14, 1902	3.39%	August 7, 1896
4% 1925.....	1903-1912	1.93%	October 13, 1905	2.80%	June 15, 1910
Great Britain					
Consols 3%.....	1873-1882	2.95%	May 24, 1881	3.34%	December, 1874
Consols 2½%.....	1883-1892	2.53%	March 29, 1888	2.95%	November 14, 1890
Consols 2½%.....	1893-1902	1.95%	July 1, 1896	3.03%	July 15, 1901
Consols 2½%.....	1903-1912	2.66%	January 5, 1903	3.45%	October 14, 1912
France					
Rentes 5%.....	1873-1882	4.24%	May 14, 1881	4.95%	May 18, 1877
Rentes 3%.....	1883-1892	3.03%	September 13, 1892	4.05%	December 17, 1883
Rentes 3%.....	1893-1902	2.86%	July 22, 1897	3.20%	January 4, 1894
Rentes 3%.....	1903-1912	2.98%	January 12, 1903	3.40%	October 8, 1912
Germany⁴					
Prussian consols 4%.....	1873-1882 ⁵	3.88%	1881	4.13%	1880
Prussian consols 4%.....	1883-1892	3.76%	December 7, 1888	4.09%	1883
Prussian consols 4%.....	1893-1902	3.79%	June 17, 1893	3.86%	October 2, 1900
Prussian consols 3½%.....	1903-1912	3.48%	April 17, 1903	4.13%	December 19, 1912
Italy					
Rentes 5%.....	1873-1882	4.70%	June 8, 1881	7.80%	1873
Rentes 5%.....	1883-1892	4.36%	December 3, 1886	5.08%	January 23, 1883
Rentes 5%.....	1893-1902	3.94%	December 24, 1902	6.05%	January 18, 1894
Rentes 3½-3¼%.....	1903-1912	3.84%	June 1, 1905	3.86%	May 3, 1912
Austria-Hungary					
Austrian rentes 4%.....	1873-1882 ¹⁰	4.85%	May 9, 1881	6.11%	June 17, 1879
Austrian rentes 4%.....	1883-1892	4.14%	September 30, 1892	5.05%	January 5, 1883
Austrian rentes 4%.....	1893-1902	3.81%	September 6, 1897	4.30%	November 13, 1893
Austrian rentes 4%.....	1903-1912	3.93%	June 26, 1903	4.71%	October 5, 1912
Russia					
Nicolai 4%.....	1873-1882	4.64%	September 21, 1875	6.40%	April 23, 1877
Nicolai 4%.....	1883-1892	4.06%	February 13, 1891	5.48%	January 13, 1883
Railroad 4%.....	1893-1902	3.76%	August 18, 1896	4.28%	January 11, 1893
Rentes 4%.....	1903-1912	3.99%	June 2, 1903	5.89%	August 19, 1907
Japan					
Sterling 4½% (1st series)	1903-1912	4.83%	April, 1910	6.10%	October, 1907

¹ Highest and lowest prices for United States bonds taken from the *Financial Review* (New York, 1914), pp. 83 to 87, and from the *Commercial and Financial Chronicle* (New York), vol. xvii, p. 621, vol. xxiv, p. 5, vol. xxxviii, p. 757, vol. xlvi, p. 421, vol. lxiii, p. 217, vol. lxxiv, p. 562, vol. lxxxi, p. 1154, vol. lxxxix, p. 1596.

Highest and lowest prices and yields for foreign government bonds, except Japanese, furnished by Messrs. F. C. Mathieson & Sons, London, England.

Highest and lowest prices for Japanese government bonds from the *Financial Review* (New York, 1912), p. 81.

² Allowing for loss if redeemed at due date (1923) at par and for reduction of interest in 1903.

³ 2½% from April, 1903.

⁴ In view of the fact that the credit of Prussia and of the German Empire has been very much the same, and that reliable quotations for Prussian securities covering a fairly long period are more easily obtainable than for German imperial bonds, we have used the Prussian consols table.

⁵ Prices from 1880 to 1882 only.

⁶ 5% less 13.20% of income tax.

⁷ 3½% from January, 1912.

⁸ From 1898, 3½%.

⁹ 5% less 20% of income tax.

¹⁰ 1879 to 1882 only.

meeting of the Royal Statistical Society, March 16, 1915, estimated the direct costs for one full year of war as follows:¹

Great Britain.....	about	\$3,398,400,000
France.....	"	2,656,320,000
Germany	"	4,502,400,000
Austria-Hungary.....	"	2,697,600,000
Russia.....	"	2,880,000,000

These figures show a total direct cost for one year of war to the leading nations involved of \$16,134,720,000. The London "Statist" ² has given the probable cost of the first twelve months of war for Great Britain as about \$3,192,000,000. The cost of the first twelve months of war for France probably will be in the neighborhood of \$3,500,000,000.³ Perhaps it is not far wrong to say that the cost of the war for the first twelve months to the leading nations involved will be in the neighborhood of from \$16,000,000,000 to \$17,000,000,000. The figures probably need not be modified much from the above to take care of the short participation of Italy during the period covered. The costs have been steadily rising, however, until the latest estimates for Great Britain — by Premier Asquith, September 15, 1915 — figure out a net war expenditure, exclusive of loans to allies and certain other items, of about \$16,800,000 a day, or at the rate of \$6,132,000,000 a year, and a gross war expenditure, including loans to her allies, of about \$20,160,000 a day, or say \$7,358,400,000 a year;⁴ the monthly war costs of France, according to the French Budget Commission, have been running at the rate of about \$397,440,000 a month, or say \$4,769,280,000 a year, and the vote of credit, asked by M. Ribot, September 16 for the last quarter of 1915, was substantially on this basis;⁵ the average monthly cost to Russia is given by M. Ribot, speaking on the same date, as about \$345,600,000, or at the rate of \$4,147,200,000 a year;⁶ the monthly war expenditures

¹ *Journal of the Royal Statistical Society* (London), vol. LXXVIII (May, 1915), pp. 361-413.

² Vol. LXXXIV, p. 664. For later figures, see vol. LXXXV, p. 99 (about \$3,600,000,000).

³ *Commercial and Financial Chronicle* (New York), June 26, 1915, p. 2117. See also statement of M. Ribot as summarized in the *Statist* (London), June 5, 1915, vol. LXXXIV, p. 571.

⁴ *Statist* (London), September 18, 1915, vol. LXXXV, p. 447.

⁵ *Commercial and Financial Chronicle* (New York), September 25, 1915, vol. 101, p. 969 and *Ibid.*, September 18, 1915, p. 877.

⁶ *Commercial and Financial Chronicle* (New York), vol. 101, p. 877.

of Germany, according to Herr Helfferich, Secretary of the Imperial Treasury, in his speech introducing the third war loan August 20, 1915, amount to about \$472,000,000, or at the rate of say \$5,664,000,000 a year.¹ The same authority estimates the costs to all the nations involved at nearly \$70,800,000 daily, over \$1,888,000,000 monthly, and about \$23,600,000,000 yearly.² Allowing for the participation of Bulgaria — which occurred after Herr Helfferich's estimate — and possibly other nations, the cost of the second year of war to all the nations involved is likely to be in the neighborhood of \$25,000,000,000.

These figures compare with the estimated cost of previous wars somewhat as shown in the table on page 80.³

To this we may add about \$16,500,000,000 as the cost of the first year of the present war and perhaps \$25,000,000,000 as the cost of a second year.

In addition to the direct cost of maintaining armies and carrying on war, there is the economic loss through cessation of production. This has been estimated by M. Guyot and the London "Economist" for the first six months of the war as about \$10,272,000,000,⁴ or at the rate of \$20,544,000,000 a year. Adding this to the direct cost, we get a figure for the first year of the war of about \$37,000,000,000. If we allow for the value of lost lives, on the basis of M. Guyot's figures (about \$4,646,400,000 for six months), we find total losses for a year of over \$46,000,000,000. This is "without allowing for the devastation and widespread destruction of fixed capital."⁵ The total losses to July 31, 1915, as estimated by Mr. Crammond, are as follows: —

Great Britain.....	\$6,038,400,000
Germany.....	13,320,000,000
Belgium, including destruction of property...	2,527,200,000
France, including destruction of property...	8,094,720,000
Austria-Hungary, including destruction of property.....	7,622,400,000
Russia, including destruction of property....	7,219,200,000
A total for the six nations of about.....	\$44,821,920,000 ⁶

¹ *Economist* (London), September 4, 1915, vol. LXXXI, p. 358. ² *Ibid.*, p. 360.

³ *World Almanac* (1915), p. 488. See also Mulhall (1899), p. 586, and *Whitaker's Almanack* (1915), p. 800. All such figures should be thought of as approximations only.

⁴ *Economist* (London), vol. LXXX, p. 51.

⁵ *Ibid.*, p. 51.

⁶ *Journal of the Royal Statistical Society*, May, 1915, pp. 361-413. For another esti-

80 AMERICAN AND FOREIGN INVESTMENT BONDS

The "Economist" estimated the direct costs to all the nations involved as about 43% and the total costs as about 96% of the national income or earnings. Strictly speaking, total loss occasioned by a war like the present one is incalculable. Such things cannot properly be measured in figures. It should be borne in mind that a very large part of the cost of war is represented by expenditures of the entire nation through the Government; and

GROSS COST OF PAST WARS FROM 1793-1913 — PUBLIC FIGURES¹

<i>Dates</i>	<i>Countries engaged</i>	<i>Cost</i>
1793-1815....	England and France	\$6,250,000,000
1812-1815....	France and Russia	450,625,000
1828.....	Russia and Turkey	100,000,000
1830-1840....	Spain and Portugal (civil)	250,000,000
1830-1847....	France and Algeria	190,000,000
1848.....	Revolts in Europe	50,000,000
	{ England	371,000,000
	{ France	332,000,000
1854-1856....	Sardinia and Turkey	128,000,000
	{ Austria	68,600,000
	{ Russia	800,000,000
	{ France	75,000,000
1859.....	{ Austria	127,000,000
	{ Italy	51,000,000
1861-1865....	United States (civil war)	5,000,000,000
1864.....	Denmark, Prussia and Austria	36,000,000
1866.....	Prussia and Austria	330,000,000
1864-1870....	Brazil, Argentina and Paraguay	240,000,000
1865-1866....	France and Mexico	65,000,000
1870-1871....	{ France	1,580,000,000
	{ Germany	954,000,000
	{ Russia	806,547,489
1876-1877....	{ Turkey	403,273,745
1898.....	Spain and United States	1,165,000,000
1900-1901....	England and Transvaal	1,000,100,000
1904-1905....	Russia and Japan	2,500,000,000
1911.....	Italy and Turkey	700,000,000
1912-1913....	Balkan Wars	1,192,130,000
Expense of wars, 1790-1860.....		\$9,243,225,000
Expense of wars, 1861-1913.....		15,972,051,234
Total.....		\$25,215,276,234

mate of the direct costs and total losses, see Charles F. Speare, "What the War is Costing Europe," *American Review of Reviews*, April, 1915, p. 452.

¹ In the case of the Balkan Wars, estimates are from bankers' statements. (See *World Almanac*, p. 488.)

that a great portion of this would be incurred in times of peace by the nation as individuals.¹ In other words, a large part of the cost of war, instead of being a true addition to expenditure, is merely a transference of expenditure from individuals to the Government. On the other hand, the activities of individuals in war are destructive, whereas in peace they are or should be constructive. Again, during and after a great war the people are induced to practice economies which in ordinary times they would be likely to neglect. Taking a still larger view, there is often a physical and moral regeneration brought about by the occurrence of a terrible war. So it will not do to assume that war is all waste — that the “cost” is all loss. The population of Germany in the Thirty Years’ War was reduced from about 16,000,000 to about 4,000,000.² Before the present war it was probably 70,000,000. The greatest prosperity of England developed after the Napoleonic wars. So also it was with our own American Civil War. There is a regeneration that nature provides. Wounds heal — as a rule they can hardly be prevented from healing. The grass that is burned in the early spring is replaced with new grass greener and more lovely. So economists have figured out how the great losses of the present war ultimately may be replaced. They will constitute a serious burden and a serious problem, however, for many years to come.

The direct costs of the war have been financed largely through borrowings. Undoubtedly a large amount of paper money has been issued — the convertibility of some of which remains to be proved. The war debts,³ according to the

¹ For an interesting article on these phases of the cost of the war, see Roland G. Usher, “The Cost of the War,” in the *Atlantic Monthly*, June, 1915, p. 847.

² Price Collier, *Germany and the Germans*, p. 30.

³ *The Boston Evening News Bureau*, September 20, 1915, has given the war debts, exclusive of bank loans, as follows:*

ALLIED LOANS

Great Britain —

3½ per cents at 95 on 3.97% basis.....	\$1,750,000,000
4½ per cents on 4.58% basis (new loan).....	2,925,000,000
Treasury bills, 1½% to 3½%.....	700,000,000†
Five-year Exchequer 3 per cents.....	230,000,000
Canadian ten-year 4½ per cents in London.....	25,000,000
Canadian one- and two-year 5 per cents in New York.....	45,000,000
Indian Government 4% domestic loan.....	15,000,000
Anglo-French loan in the United States.....	250,000,000

Total.....\$5,949,000,000

* This list of loans has been corrected from other sources to October 23, 1915.

† Estimated.

82 AMERICAN AND FOREIGN INVESTMENT BONDS

London "Statist" of October 23, 1915 (vol. LXXXVI, pp. 182-86), up to about that time, were as follows:—

WAR DEBT*

Great Britain —

November, 1914, 3½% war loan.....	\$1,680,000,000
March, 1915, 3% exchequer bonds, net.	161,280,000
July, 1915, 4½% war loan.....	2,808,000,000
October, 1915, 5% American loan.....	250,000,000
Treasury bills.....	1,027,200,000
Total war debt.....	\$5,926,480,000

France —

National defense bonds.....	\$1,230,000,000
Treasury bonds.....	450,000,000
One-year 5% notes in London.....	50,000,000
One-year 5% notes in New York.....	30,000,000†
Collateral loan in New York.....	43,000,000
Credit in New York (1914).....	10,000,000
Credit in New York (1915).....	20,000,000
Anglo-French loan in the United States.....	250,000,000
Total.....	\$2,083,000,000

Russia —

5 per cents at 94 on 5.35% basis.....	\$257,500,000
Second internal loan.....	257,500,000
Third internal loan five-year 5½ per cents.....	515,000,000
Four per cent bonds.....	309,000,000
Treasury bills.....	979,500,000
Issues in England and France.....	277,000,000
Total.....	\$2,595,500,000

Italy —

Twenty-five-year 4½ per cents.....	\$200,000,000
Twenty-five-year 4½ per cents at 95.....	190,000,000
One-year notes (United States) 6%.....	25,000,000
Total.....	\$415,000,000
Grand total Allied loans.....	\$11,042,500,000

GERMAN AND AUSTRIAN LOANS

Germany —

First war loan, 5 per cents at 97½ on 5.32% basis.....	\$1,115,000,000
Second loan, 5 per cents at 98½.....	2,265,000,000
Third loan at 99.....	3,000,000,000
Nine months' notes in United States.....	10,000,000
Total.....	\$6,390,000,000

Austria-Hungary —

Austrian 5½ per cents at 97½ on 6.10% basis.....	\$433,000,000
Hungarian 6 per cents at 97½ on 6.70% basis.....	237,000,000
Second war loan to June 25.....	900,000,000
Loan from German bankers.....	76,000,000
Second loan in Germany.....	125,000,000
Credit in Germany.....	60,000,000
Total.....	\$1,831,000,000

Turkey —

Loan in Germany.....	\$250,000,000
Total of German loans.....	\$8,471,000,000
Grand total of all belligerent loans.....	\$19,513,500,000

* Reduced at the rate of \$4.80 to the pound sterling.

† Estimated.

(For third German loan, see *Commercial and Financial Chronicle* [New York], vol. 101, p. 1055, and for Italian 6% loan, see *ibid.*, p. 1327.)

UNITED STATES AND FOREIGN GOVERNMENT BONDS 83

France —

Advances from the Bank of France	\$1,344,000,000
French treasury bonds discounted by Bank of France in order to make advances to foreign Governments.....	101,760,000
3½% loan of July, 1914	96,000,000
Bon de la Défense Nationale.....	1,511,232,000
Obligation de la Défense Nationale.....	430,272,000
Loan from England.....	240,000,000
Loan from America	250,000,000
Total sum borrowed by France for the war.....	\$3,973,264,000

Russia —

5% short-term treasury bonds placed with State Bank.....	\$1,294,363,000
5% long-term loans.....	1,013,200,000
Short-term bonds placed in England.....	253,300,000
Short-term bonds placed in France.....	316,625,000
Treasury bills, etc.	668,712,000
Total.....	\$3,546,200,000

Italy —

December, 1914, 4½% loan.....	\$192,000,000
July, 1915, 5% loan.....	192,000,000
Loan from Bank of Italy.....	233,593,200
Total war debt.....	\$617,539,200

Germany —

September, 1914, 5% war stock.....	\$824,112,000
September, 1914, 5% treasury bonds.....	236,000,000
February, 1915, 5% war stock.....	2,148,308,000
September, 1915, 5% war loan.....	2,855,836,000
Treasury bills (approximate).....	1,015,744,000
Total war credit obtained.....	\$7,080,000,000

Austria-Hungary —

November, 1914, 1st Austrian 5½% war loan.....	\$459,998,400
Valuta loan from Germany.....	72,000,000
November, 1914, Hungarian 6% war loan.....	234,000,000
May, 1915, 2d Austrian war loan.....	555,998,400
June, 1915, 2d Hungarian war loan.....	224,798,400
June, 1915, 2d loan from German bankers.....	73,200,000
Total publicly issued debt.....	\$1,619,995,200
Estimated floating debt.....	1,022,400,000
Estimated total to September 30.....	\$2,642,395,200

These figures show total war loans for the Allies of \$14,063,-483,200 and for Germany and Austria-Hungary of \$9,722,395,200, or a total of \$23,785,878,400. The figures include advances by the

great central banks to the Governments for war purposes. France and Russia particularly have financed their war costs to a great extent through the central banks. As in the war of 1870, France has leaned heavily on the Bank of France.¹

It is hardly worth while to attempt to make any definite statements as to the total present debts of the leading nations engaged in this war. When the war is ended, it will be possible to figure with some accuracy the net additions to the various national debts, to figure the debts *per capita*, and to estimate the proportion between total debts and wealth and between debt charges and national income. Suffice it to say, that already, in October, 1915, the national debts of the principal belligerents as a whole probably have doubled.² The debts of some of the nations at war have more than doubled. Chancellor of the Exchequer McKenna in introducing the budget estimated the dead-weight debt of the United Kingdom March 31, 1916, as likely to be £2,200,000,000 (\$10,560,000,000).³ This would be an increase of over two hundred per cent above the debt in 1912. The debt of Germany already has received an addition of 30,000,000,000 marks⁴ (October, 1915), or say \$7,080,000,000 — a war increase alone over our figures for 1912 of about one hundred and forty-five per cent. All these great increases in debt, of course, are for what have been called unproductive purposes — that is, for war. The war loans constitute a staggering addition to the dead-weight debts of the nations concerned.⁵

How heavy will be the burdens of these huge debts after the war will depend in large measure on the terms of peace and on the course the indebted nations pursue after the war. We will not here discuss the various suggested terms

¹ For figures of bank-note expansion, gold-holdings, and assets and liabilities of the banks, see the *Statist*, October 23, 1915, vol. LXXXVI, pp. 182-86. In France, Germany, and Russia the convertibility of the paper currency has been suspended. (*Economist* [London], July 10, 1915, vol. LXXXI, p. 47.)

² The loans of the nations at war from the beginning of the Balkan wars, October 8, 1912, up to the outbreak of the European war, July 30, 1914, were, according to the *Boston News Bureau*, \$830,000,000. Of this Germany and Austria borrowed \$489,000,000 and France, Serbia, and Belgium \$341,000,000. (*Boston News Bureau*, October 9, 1914.)

³ *Economist* (London), vol. LXXXI, p. 463.

⁴ *Ibid.*, p. 358.

⁵ The net debt of the United States August 31, 1915, was \$1,119,376,669 — or \$92,690,643 more than in 1912. (*Commercial and Financial Chronicle* [New York], vol. 101, p. 989.)

of peace — such as the restoration of Alsace-Lorraine, the creation of an autonomous Poland and other matters of this kind. Whatever indemnities are paid will add just so much to the burden of the nation or nations paying them and take away just so much from the burdens of the nations receiving them. So also will any losses or acquisitions of territory increase or lessen the burdens of the debts. From a financial point of view, what is essential, however, is that the peace shall be, as far as possible, lasting, — that it shall make impossible a recurrence in the near future of any such catastrophe as we are witnessing. Otherwise discussion of national solvency is a waste of time. In order to make a lasting peace, it would seem that boundaries should be rectified on the basis of nationalities or, perhaps we may say, of races. In this connection there are many questions to be settled involving the present dominions of Austria-Hungary. Let us hope that there will be no effort to crush any nation or people — even though that nation temporarily may have offended against all the laws of civilization. Yet no peace will be a peace unless so-called militarism is done away with. Expenses for military preparation must be reduced largely and the energies of mankind devoted to productive purposes. All sorts of programmes have been suggested — including that of a United States of Europe with an international military and naval force to maintain order and enforce peace.¹ Undoubtedly, with the backing of the laboring classes and the Socialists in many countries, a tremendous effort will be made to bring about the settlement of as many disputes as possible through arbitration. There will be also — it is evident already — a tremendous movement toward democracy and liberal institutions.² Some such solution would seem to be essential to continued national solvency and national good faith.

If Baxter in 1874 was alarmed at the rate at which nations were borrowing and feared then for the solvency of some of them,³ what

¹ Dr. Nicholas Murray Butler in the *Boston Sunday Herald*, October 18, 1914, and meeting of the League of Peace in Independence Hall, Friday, June 17, 1915. (*Boston Evening Transcript*, June 17, 1915.) See also Society to Eliminate Economic Causes of War. (*Commercial and Financial Chronicle* [New York], vol. 100, p. 2134.)

² The immunity of private property at sea in time of war, or even the neutralization of all commerce, are subjects of great interest and importance. (See the *Evening Post*, New York, August 10, 1915.)

³ *Journal of the Royal Statistical Society*, vol. XXXVII, pp. 11-13.

shall we say in 1915 with debts piling up at unheard-of rates and with the end not yet in sight? ¹ It is hard to escape the conclusion that after the war most of the nations engaged will be forced either (1) to reduce their expenditures for armaments materially in order to pay interest on their debts or (2) to compromise or repudiate at least a portion of their obligations. The debt histories which we have given show that such things are not unheard of. There has been during the past one hundred years, of course, an enormous increase in the wealth of the leading nations at war. For instance, the burden of the British debt, on the basis of debt to wealth, even with the great additions to date for war, is less than one third as great as in 1816. Great Britain could fight between three and four years more without making her debt bear a larger proportion to her resources than it did after the Napoleonic wars. ² At the same time there is a limit. There is less reason to think that her resources will increase at the rate they did in the earlier period. We can apply the same sort of tests to the other nations at war. Then there is another consideration. Whenever there is a crushing burden of debt or of taxation, — especially if those burdens have failed to produce any corresponding benefit, — the temptation to compromise is very strong. It is then that the stuff of which nations are made is revealed. Continued expenditures for military purposes at the rate which has prevailed during the past thirty years, ³ however, added to the charges on the debts created through this war, are likely to lead to bankruptcy. It is a grave question, of course, whether in the cases of some nations bankruptcy can be avoided under any circumstances.

We will not undertake to estimate the relative credit and standing of the various nations after the war. Such a task is impossible until one sees more clearly what the outcome of the war is to be.

¹ Some decisive military action, inability to borrow, inability to pay interest on existing debts, or general economic exhaustion may bring the war to an end.

² For an interesting article on this phase of the subject, see "Will the War Bankrupt Europe?" in the *North American Review*, August, 1915, p. 174.

³ Between 1881 and 1911, the combined annual expenditure for army and navy of the five great European nations — Great Britain, France, Germany, Austria-Hungary, and Russia — much more than doubled, showing a far higher rate of increase than the respective national incomes. (*Economist* [London], vol. LXXIX, pp. 556 and 914.)

It would seem, however, that the United States, Russia, and Japan would emerge from the war relatively less weakened than any other nations. The United States and Russia, on account of the continental nature of their territory, the size and character of their population, and the immensity of their resources, developed and undeveloped, are in an enviable position. Japan has not been placed under the burdens that some of the other nations have been; and it may succeed in developing its material interests in Korea and China on a scale which will greatly enhance its credit. It is a law of nature never violated that the leadership of nations goes to the strongest — that is, the strongest in a broad sense. Is it too much to expect that the United States after the war will be in a position to assume the leadership which has been held for a hundred years by Great Britain?

Status of
nations after
the war

Until the effect of the present war on the debts and financial condition of the nations engaged becomes clearer, American investors should exercise great care in the purchase of foreign government bonds. Mr. Mortimer L. Schiff, a well-known New York banker, is quoted as saying in substance: that an investor should be assured that

Proper attitude
of American in-
vestors toward
foreign govern-
ment bonds

a borrowing country is administered economically; that in its annual budget, income and expenditures balance, and that the proceeds of any loan applied for are to be used for productive purposes; that from the point of view of the investor dreadnoughts and rifles are not good security; that a country should provide out of its own budget, through taxation of its own people or from internal loans, for everything that may be called its non-productive expenditures, and that it should restrict its foreign borrowing to such productive purposes as railroads, irrigation schemes, and such others as may be self-supporting; that in financing productive enterprises in foreign countries, the most acceptable form of security would be a bond having a direct lien or mortgage on the enterprise itself and guaranteed by endorsement by the Government, rather than a simple government obligation; that a definite pledge for the service of the loan of all or a portion of some definite form of governmental revenue would be of advantage; that foreign loans placed in this country should bear, if possible, a defi-

nite relation to trade with this country; that, as a general rule, short-term securities should be avoided, but a redemption provision should be embodied in every long-time bond; that a sinking fund, if possible, should be provided; and that in general the obligation should be of such a character as to be not too great a burden on the borrower — lest defaults become necessary.¹ These suggestions have much of value. Until the Governments involved in this war have shown their ability to maintain solvency, Americans should exercise the greatest care in the purchase of their securities.

Illustrating not only certain principles stated by Mr. Schiff, but in a broad way everything discussed in this chapter, is the \$500,000-
 Anglo-French dollar loan 000 Anglo-French loan brought out in September and October, 1915. This loan was in the form of a joint and several obligation of the United Kingdom of Great Britain and Ireland and the French Republic. It bore 5% interest and matured in five years, but was convertible at any time up to maturity into joint 4½% bonds due in 1940, but redeemable at the option of the borrowing nations after 1930. The loan was made payable in American gold dollars, and was brought out at a price and under conditions calculated to insure its wide distribution among the American investing public.

In several respects, this loan was unique. It was the largest bond issue of any kind ever brought out at one time in the United States. It was the first large loan made by the people of the United States to foreign nations. It was, moreover, the first external issue ever put out by Great Britain. And it was, so far as we know, the first joint and several obligation of two great powers.

Yet fundamentally this loan was an ordinary transaction and grew out of conditions which we have discussed at length in this chapter. In its origin the loan was part of a commercial transaction. Great Britain and France under war conditions had been and were importing from this country such a large excess of merchandise² that they were unable to pay for it conveniently with American securities or with gold. In spite of holdings, by the English and French people, of American securities many times the

¹ *Annalist* (New York), May 31, 1915, p. 552, and *Commercial and Financial Chronicle* (New York), May 29, 1915, p. 1801.

² Their income from expenditures by Americans abroad also had been reduced greatly.

amount of the loan sought, these securities were not available immediately to pay for goods. Moderate amounts of such securities had been shipped to this side, to be sure, almost every week. But English and French investors ever since the beginning of the war had shown a reluctance to part with their American securities. Earlier in this chapter we called attention to the fact that during a whole year of war all Europe had sold back to us only between \$300,000,000 and \$500,000,000 of our securities. This explains incidentally why the deposit of American securities as collateral for such a large loan was out of the question.¹ As for shipments of gold by Great Britain and France to pay for their huge debit balance to this country, this method — even if we allow that it were possible — would have been a clumsy, an unnecessary, and an undesirable way. Considerable amounts of gold, as well as American securities, had been and were being shipped to this country. But the English and the French needed the gold badly to support their banking structures in time of war and to make purchases which they could not pay for otherwise. It happened that we did not need the gold at all. We had already what might be called “an uncomfortable excess.” So the English and the French arranged to buy of us and we to sell to them the goods they needed on credit. The loan was called and was a “credit” loan — “credit” meaning here a “commercial credit.” It established a convenient method for Great Britain and France to pay for wheat, cotton, manufactures, and other goods² imported from the United States; and from an American point of view, it made possible the marketing with two of our best regular customers of an unusually large amount of the products of our farms and factories. In other words, it did for us what the loans of Great Britain to other countries for the past hundred years had done — it financed our trade.

From the investor's point of view, the loan was safe and attractive. The yield — $5\frac{1}{2}\%$ to $5\frac{7}{8}\%$ — was high and the security

¹ The English and French might have been taxed or otherwise forced out of holding their American securities, but measures like this would have been harsh and undesirable.

² Probably only a small part, if any, of the loan was used to purchase so-called “munitions.” Such use of the specific proceeds of the loan was unnecessary. Only a relatively small part of our exports to the Allies were “munitions of war.” In the minds of American investors, complete separation of “munitions” from the loan would have had a beneficial effect.

ample; for — to speak only of one part of the wealth of Great Britain and France — the four to five billion of American securities held by the two nations were an asset for the payment of their debt, whether they sold them back to us or not. Then, again, the loan was especially safe because it was part of the external or foreign debt of the two countries and bore a small proportion to their domestic debt. For while there is no such thing as a “first mortgage on the British Empire,” or even a first lien in any legal sense, yet it is a fact that all nations — even nations with records for repeated scaling of their domestic debts, such as Austria and Russia — have been careful about the payment of their foreign debts. Morally and practically they have regarded such debts as having precedence over their domestic obligations.

In a broad way, this Anglo-French loan marks, we hope and believe, the entrance of the United States into the family of the “lending nations.” Sooner or later this country would have reached that position anyway. But the great war has dried up in Europe the wells of capital available for the development of other parts of the world. For some time to come, Europe will need all her own capital at home — and probably considerable from this country beside. She will not be in a position to lend freely to the Argentine, to Brazil, to Mexico, and the other food and raw material producing countries. Probably she will withdraw gradually a large part of the huge investment she has in the United States. This is our opportunity. Not only can we reduce gradually our large capital indebtedness to Europe, but we can — if we put our house in order — take Europe’s place in lending capital for the development of the rest of the world, taking in exchange other people’s securities and extending with those people the markets for our own merchandise. The change will not take place all at once. This war, to be sure, has given us a chance for a colossal stride. Already we have repurchased (October, 1915) our own securities held abroad or have loaned to foreign nations to the extent of between say \$1,100,000,000 and \$1,300,000,000. By so much have we reduced our debt to Europe and by just so much has Europe lost her creditor position. In proportion to the reduction of the debt, in a broad way, will be the reduction in interest payments abroad. But it will take some time (unless the war is unduly prolonged) — perhaps twenty-five

years — to change from being a “debtor” to a “creditor” nation. Not until then will New York in any permanent sense become the financial center of the world: for to become the great international banker we must establish broad trade relations with all the rest of the world, and we must be in a position to finance our foreign trade by lending freely. We must not be provincial or narrow. To lend freely we must save. We must, moreover, establish an adequate merchant marine and satisfactory banking facilities in foreign countries. All these things we must do to seize to the full the present opportunity and to place the credit of the United States indisputably and for a long time to come at the head of the list.¹

It remains only to give an idea of the prices of some of the leading government bonds under the stress of war on a colossal and unprecedented scale. In February and March, 1915, after the war had been in progress about six months, some of the leading securities of the allied nations were quoted approximately as follows:²

War prices
of government
bonds

British consols, 2½%.....	(Flat) ³ 68½ (February 5)
French rentes, 3%.....	68½ (March 12)
Italian rentes, 3½%.....	79½ (February 5)
Russian, second series 4%.....	75 (February 5)
Russian, 1906, 5%.....	95½ (February 5)
Japanese, sterling, 1910, 4%.....	71½ (February 5)
Japanese, sterling, 1905, second series, 4½%.....	85½ (February 5)

The London “Economist”⁴ has given highest and lowest prices, highest price in July, 1914, and prices on February 16, 1915, of some leading “enemy” securities — including German imperial 3% bonds, Prussian 3½% consols, Austrian 4½% treasury notes,

¹ For information in regard to this loan, see *Commercial and Financial Chronicle* (New York), vol. 101, p. 1053; *Statist* (London), vol. 86, p. 14; and *Economist* (London), vol. 81, p. 499.

² *Statist* (London), vol. LXXXIII, pp. 195 and 406. For later prices of government bonds of all the nations at war, see *Economist* (London), July 3, 1915, vol. LXXXI, p. 8. The latest prices for British consols, one issue of Japanese bonds, and one issue of Russian bonds, given in this number of the *Economist*, are “minimum” or “pegged” prices.

³ Prices include accrued interest.

⁴ *Economist* (London), February 20, 1915, p. 313.

and Hungarian 4% and 4½% rentes. These prices are hardly worth quoting. The low prices given represent prices which Englishmen or, at any rate, traders on the London Stock Exchange would pay for the government bonds of their enemies, and cannot be taken as representing the credit of the nations concerned. Furthermore, interest on "enemy" securities is not being paid to British holders.¹ The prices given in our list of loans put out during the war give a fairer idea of the credit of the various nations. The huge domestic loan of Great Britain — about \$3,000,000,000 — has been put out in the form of 4½ per cents at par, which price includes several months' accrued interest; and the loan raised in the United States has been sold to investors at 96½ to 98 and interest. The French national defense bonds have been put out at par² for short-term 5% bonds; Russia has put out 5 per cents at 94 and 5-year 5½ per cents; Italy has borrowed with 25-year 4½ per cents and one year convertible 6 per cents; Germany has put out 5 per cents at from 97½ to 99; Austria has put out 5½ per cents at 97½; and Hungary 6 per cents at 97½. The credit of Great Britain remains highest of all the nations at war, with France next,³ and Germany third. A decisive outcome of the war one way or the other would have the effect, of course, of enhancing the market value of the securities of the victorious nations and of depressing the market value of the securities of the defeated nations. How radical has been the change in the credit of all the nations concerned, however, may be seen by comparing the prices of 1915 with those in our table for 1913.⁴

¹ *Economist* (London), July 3, 1915, vol. LXXXI, p. 8.

² Advices received from the *Boston News Bureau*.

³ The issue price — 88 — of the 5% perpetual rentes brought out in November, 1915, would seem to show the credit of Germany to be higher than that of France. (See the *Statist*, vol. LXXXVI, p. 592.)

⁴ The following prices of leading government bonds before and during the Franco-Prussian War may be of interest (*Economist* [London], September 5, 1914, p. 416): —

	Closing price 1869	Fluctuations in 1870		Closing price 1870
		Highest	Lowest	
British, 3% consols.....	92	94½	88½	91½
French, 3% rentes.....		75½	51	50
United States, 6%.....	86	91½	78	89
Russian, 4%.....	65	70½	60	66½
Italian, 5%.....	56	60½	43	56

On February 11, 1915, the United States Panama 3 per cents were quoted at 101½ and interest, bid, or only ⅔ of 1% less than the price in January, 1913.¹

We have traced the rise and development of the so-called great powers, whose government bonds are the leading national securities; we have considered the relation which the debts of these nations bore to their resources before the present great war; we have taken up briefly the debt history or record of good or bad faith of the nations issuing these obligations; we have discussed in a general way the financial, economic, and political status of these nations as bearing on their credit; and we have tried to indicate as far as possible at this time the effect of the great war on their condition. All discussions of government bonds involve in a certain way every factor relating to national existence. Fluctuations in prices of government bonds represent in a broad way fluctuations in the resources, debt, income, expenditure, progress, power, and prestige of the nations issuing the bonds, as well as fluctuations in the general economic and financial conditions prevailing throughout the world. We must remember that government bonds, as we said at the beginning of this chapter, usually are simply promises to pay and promises not enforceable by any legal process. We must try to make up our minds, from all the data available, how good in each case the promise is.

Summary of
factors enter-
ing into the
values and
prices of gov-
ernment bonds

¹ *Commercial and Financial Chronicle* (New York), February 13, 1915, p. 540.

CHAPTER III

STATE BONDS

STATE bonds, like government bonds, usually are simply promises to pay. At times some of our States have issued bonds to railroads,

State bonds usually are simply promises to pay canals, or other private corporations and have taken as security mortgage bonds or stocks of the companies.

There have been cases also of railroad or other corporation bonds guaranteed by States. As a rule, however, sound financing requires that state bonds shall be issued only for strictly public purposes, and that the interest shall be payable out of taxes levied on all the taxable property within the State.

In view of the fact that no bondholder — unless the bondholder happens to be another State — can sue a State without its consent,¹

No legal remedy for collecting defaulted state bonds the character or quality of the promise to pay is of great importance. The case may be stated even more strongly by saying that in the last resort there is no

legal remedy whatever for collecting defaulted state bonds. Even if a verdict is secured in the courts, the Legislature may refuse to make any appropriation to pay interest² or principal. This is for the reason that in the matter of paying debts a State, like a nation, is a sovereign power.

With allowance for the difference in the character of the unit,

Other factors determining the safety of state bonds the factors determining the safety of state bonds are much the same as in the case of government bonds.

They may be grouped about these headings:—

- (1) The debt statement of a State or the proportion of net debt to property and to population.
- (2) The debt history of a State or its record of good or bad faith.
- (3) The present constitutional provisions governing the creation and payment of debt.

¹ Constitution of the United States, Eleventh Amendment.

² See 108 U.S. 76, *New Hampshire vs. State of Louisiana* and *New York vs. State of Louisiana*, and 192 U.S. 286 (1904), *South Dakota vs. North Carolina*. The latter case resulted finally in the settlement of a small amount of defaulted bonds by North Carolina. (See *Commercial and Financial Chronicle*, vol. 80, p. 1382.)

- (4) The amount and character of the population.
- (5) General considerations bearing on the present and future prosperity of the State, such as size and location of territory, natural resources, and water and rail facilities.

We will take up first the debt statements of the various States.

We give on pages 96 and 97 a table for all the States of the Union, showing: (1) bonds, special debt to trust funds, and floating debt; (2) cash, securities, and sinking-fund assets offsetting same; (3) debts less sinking-fund assets; and (4) same *per capita*.¹

Debt statements of the various States

As may be seen from the accompanying table (Table I), the States of Vermont, New Jersey, Delaware, Florida, Iowa, North Dakota, South Dakota, Nebraska, Kansas, Wyoming, Nevada, and Oregon have debts less sinking-fund assets of less than \$1,000,000 each. The State of Pennsylvania has no net debt at all, and the State of West Virginia has no debt which it has recognized.² The States having debts less sinking-fund assets in excess of \$5,000,000 are Massachusetts, Rhode Island, Connecticut, New York, Maryland, Ohio, Virginia, North Carolina, South Carolina, Georgia, Alabama, Tennessee, Louisiana, Michigan, Oklahoma, and California.

As far as *per-capita* net debts go, the States having the smallest — in addition to Pennsylvania and West Virginia which have none at all — are: Oregon, \$.04; Kansas, \$.14; Iowa, \$.16; New Jersey, \$.24; Nebraska, \$.31; Illinois, \$.39; and Indiana, \$.49. The States having the largest net debts *per capita* are: Massachusetts, \$22.78; Arizona, \$13.28; Virginia, \$10.46; New York, \$9.05; Rhode Island, \$9.02; and Louisiana, \$7.89. In the cases of both Massachusetts and Arizona, the debt figures include local debts for which the States have made themselves responsible.

Smallest and largest debts per capita

These figures as to the size of the debts and the net debts *per capita* in the various States, while important, must not be taken as conclusive in the matter of the relative safety of the various state bonds. There must be considered in addition not only what the States have to show for

The net debt showing alone is not conclusive

¹ Table from Department of Commerce, Bureau of the Census, *Wealth, Debt, and Taxation*, 1913 (Washington, 1915), vol. 1, p. 37.

² The State of West Virginia has been held liable for a portion of the debt of the old State of Virginia. This subject will be discussed later in this chapter.

TABLE I

State	Debt				Funds and Investments			Sinking Fund Assets	Debt less sinking fund assets		Class of Fiscal Year
	Bonds	Special debt to public trust funds	Floating	Total	Cash	Securities	Total		Amount	Per Cap-ita	
Total	\$664,836,427	\$38,530,142	\$10,430,056	\$422,706,525	\$136,075,610	\$353,330,365	\$490,304,075	\$76,080,571	\$345,043,305	\$3.57	—
Alabama	9,057,000	—	488,278	13,132,375	262,032	3,587,007	3,849,140	—	13,132,375	5.05	Sept. 30, 1912
Arizona	3,328,275	—	66,006	3,594,371	1,034,083	—	1,034,083	520,553	3,064,818	13.28	June 30, 1913
Arkansas	1,290,500	—	—	1,290,500	801,740	1,250,500	2,052,240	14,434	1,236,066	0.76	Sept. 30, 1912
California	10,098,500	707,500	012,808	11,001,058	12,038,040	8,006,875	21,034,915	868,314	10,222,744	3.83	June 30, 1913
Colorado	1,144,400	—	8,030,540	3,173,040	2,043,876	2,206,138	4,250,014	—	3,173,040	3.70	Nov. 30, 1912
Connecticut	7,064,100	—	46,351	7,110,451	2,424,202	2,022,068	4,446,270	—	7,110,451	6.12	Sept. 30, 1912
Delaware	565,000	261,785	—	826,785	93,316	1,534,907	1,628,223	65,663	763,122	3.70	Dec. 31, 1912
Florida	601,567	—	17,632	619,199	1,011,535	1,767,067	2,779,502	—	619,199	0.77	Dec. 31, 1912
Georgia	6,352,500	381,702	200,000	6,934,202	1,113,517	548,062	1,661,579	—	6,034,202	2.57	Sept. 30, 1912
Idaho	2,364,250	—	86,453	2,450,703	1,282,188	3,015,016	5,108,104	307,380	2,143,314	5.02	Sept. 30, 1912
Illinois	17,500	1,813,730	441,300	2,272,630	5,400,210	2,040,210	7,339,420	—	2,272,630	0.39	Sept. 30, 1912
Indiana	655,615	604,548	90,630	1,350,783	330,405	12,654,685	12,990,090	478	1,350,305	0.49	Sept. 30, 1912
Iowa	—	10,037	345,733	356,670	1,603,440	5,400,974	7,184,423	—	356,670	0.16	June 30, 1913
Kansas	370,000	—	—	370,000	1,735,277	10,354,648	11,080,925	126,870	243,121	0.14	June 30, 1913
Kentucky	6,304	2,480,627	1,065,153	4,452,174	361,004	2,554,127	2,916,031	10,307	4,441,867	1.90	June 30, 1913
Louisiana	12,019,028	1,440,181	77,041	13,546,150	850,025	2,683,120	3,533,154	—	13,546,150	7.50	Dec. 31, 1912
Maine	700	1,254,298	—	1,254,098	457,281	1,950,108	2,716,370	—	1,254,098	1.67	Dec. 31, 1912
Maryland	13,033,750	—	—	13,033,750	1,887,168	7,661,389	9,548,557	5,701,837	7,333,013	5.56	Sept. 30, 1912
Massachusetts	117,134,662	—	668,330	117,802,991	6,360,066	46,106,201	52,466,167	38,251,901	70,551,000	22.78	Nov. 30, 1912
Michigan	—	6,806,212	102,880	7,089,092	9,367,722	6,506,212	16,263,934	—	7,089,092	2.41	June 30, 1913
Minnesota	900,000	—	445,200	1,345,200	2,002,790	27,772,071	30,265,400	—	1,345,200	0.63	July 31, 1912
Mississippi	1,506,800	2,344,674	608,046	4,460,519	200,000	2,344,674	2,505,673	—	4,460,519	2.41	Sept. 30, 1912
Missouri	283,000	4,308,830	91,688	4,775,527	2,081,810	4,423,830	7,405,660	104,309	4,671,218	1.40	Dec. 31, 1912
Montana	1,200,000	—	547,010	1,747,010	1,401,641	4,028,747	5,430,388	235,036	1,512,874	3.73	Nov. 30, 1912

¹ In Arizona the State has assumed responsibility for a large amount of county and municipal debt and has leased state obligations to cover the same, holding the counties and municipalities responsible in turn.

² Massachusetts has assumed liability for debts of metropolitan districts which in most States probably would be classed as local, county, or municipal debt. These district debts account for over \$70,000,000 of the gross debt of nearly \$118,000,000.

TABLE I (continued)

State	Debt				Funds and Investments			Sinking fund assets	Debt last sinking fund assets		Class of Fiscal Year
	Bonds	Special debt to public trust funds	Floating	Total	Cash	Securities	Total		Amount	Per capita	
Nebraska	—	—	\$374,394	\$374,394	\$573,310	\$9,307,088	\$9,881,398	—	\$374,394	\$0.31	Nov. 30, 1912
Nevada	\$134,000	\$80,000	56,750	670,750	379,028	2,124,000	2,703,028	\$63,064	607,695	6.70	Dec. 31, 1912
New Hampshire ..	1,376,100	604,630	49,872	2,120,611	508,837	1,744,011	1,713,748	105,000	1,935,011	4.50	Aug. 31, 1912
New Jersey	—	110,000	526,060	642,060	8,084,185	5,872,083	13,957,168	—	642,060	0.24	Oct. 31, 1912
New Mexico	1,248,000	—	88,632	1,236,632	655,376	—	655,376	18,423	1,218,209	3.41	Nov. 30, 1912
New York	109,702,660	688,376	1,066,096	111,457,332	36,088,559	30,326,399	66,414,958	25,252,085	86,203,247	9.05	Sept. 30, 1912
North Carolina ..	7,537,950	—	525,486	8,063,436	290,856	4,688,259	4,979,115	—	8,058,430	3.54	Nov. 30, 1912
North Dakota	937,300	—	—	937,300	840,663	7,058,772	8,799,435	116,876	820,424	1.20	Oct. 31, 1912
Ohio	1,665	5,254,071	43,704	5,300,430	4,782,140	5,270,071	10,052,111	158,388	5,142,042	1.05	Nov. 15, 1912
Oklahoma	3,053,000	—	3,875,243	6,928,243	1,387,177	5,069,186	6,456,357	—	6,030,243	3.74	Nov. 30, 1912
Oregon	613	—	30,190	30,802	993,736	6,491,331	7,485,067	—	30,802	0.04	Sept. 30, 1912
Pennsylvania	142,160	317,000	—	659,160	9,781,851	931,055	10,712,906	785,511	(1)	(1)	Nov. 30, 1912
Rhode Island	5,580,000	—	220,308	5,800,308	922,708	7,02,660	1,683,368	673,403	5,126,815	9.02	Dec. 31, 1912
South Carolina ..	6,444,165	250,339	417,371	7,111,875	766,217	1,109,069	1,875,286	921,839	6,190,036	3.98	Dec. 31, 1912
South Dakota	—	—	370,000	370,000	923,135	10,862,995	11,786,130	—	370,000	0.58	June 30, 1913
Tennessee	11,703,666	—	18,060	11,811,726	878,309	405,000	1,283,309	86	11,811,640	5.32	Dec. 30, 1912
Texas	3,977,500	—	678,999	4,656,499	1,399,149	6,079,149	7,478,298	—	4,656,499	1.14	Aug. 31, 1912
Utah	1,210,000	—	210,504	1,420,504	1,661,701	3,216,318	4,878,019	—	1,420,504	3.62	Nov. 30, 1912
Vermont	—	346,631	223,275	569,906	313,093	1,249,495	1,562,498	—	569,906	1.58	June 30, 1913
Virginia	22,094,044	2,407,606	92,301	24,654,851	379,797	8,008,378	3,611,175	2,611,706	22,043,145	10.46	Sept. 30, 1912
Washington	337,024	—	1,224,088	1,556,012	2,446,248	9,670,141	12,116,389	—	1,556,012	1.21	Sept. 30, 1912
West Virginia ..	—	2,251,000	—	2,251,000	1,616,315	973,300	2,589,715	—	—	0.03	June 30, 1913
Wisconsin	—	—	—	—	1,924,891	6,652,065	8,576,956	—	2,251,000	0.77	Sept. 30, 1912
Wyoming	117,000	—	5,375	122,375	818,430	554,812	1,373,251	—	122,375	—	—

1 Sinking fund exceeds total debt by \$126,351.

2 No debt reported in West Virginia (see text statement).

their debts,¹ but also the proportion between the debts and the value of taxable property.

Percentage of net debt to assessed valuation in the different States In the table on page 99, we give assessed valuation, same *per capita*, debt less sinking-fund assets, same *per capita*, and per cent of debt less sinking-fund assets to assessed valuation in all the States in 1912-13.²

This table (Table II) shows that the States of Massachusetts, Virginia, North Carolina, South Carolina, Alabama, Mississippi, Tennessee, Louisiana, New Mexico, Arizona, and Idaho have net debts of 1% or over of their assessed valuations. The largest percentage of net debt is that of Virginia with 2.55% of its assessed valuation. States having net debts of less than one tenth of 1% of their assessed valuations, in addition to Pennsylvania and West Virginia, are: New Jersey, Ohio, Indiana, Wisconsin, Minnesota, Iowa, Nebraska, Kansas, Wyoming, and Oregon.

Like the figures for the debts themselves, these figures showing the proportion of net debts to assessed valuations are only part of the story. In every State the question arises as to what part of the actual or true value of property the assessed valuation represents.³ In New York State, for instance, the assessed valuation for 1912 represents only about 44.51% of the estimated true value of property as given by the census, and in Pennsylvania the assessed valuation represents only about 32.79% of the estimated true value. In Ohio the proportion of assessed valuation to true value of property is about 72.75%, whereas in Illinois it is only about 15.14%. In Massachusetts the proportion is 76.20% and in California 34.51%. In any given State the relation of the assessed value to the true value of the property, as far as can be ascertained, should be borne in mind in estimating the burden of debt on the State.

On the whole, it may fairly be said that the debts of our States are small. This has not always been true to the same extent that it

¹ For value of public properties of States, see Abstract of Special Bulletins, *Wealth, Debt and Taxation*, 1913 (Washington, 1915), vol. 1, p. 58. The total value of public properties of all the States in 1913 is given as \$695,499,187, compared with total debts less sinking-fund assets of \$345,942,305.

² *Wealth, Debt and Taxation*, 1913 (Washington, 1915), vol. 1, pp. 37, 747, 749.

³ For estimated true value of all property, 1850-1912, and same *per capita* by States, see *Wealth, Debt, and Taxation*, 1913, vol. 1, pp. 23-26.

TABLE II

State	Assessed valuation *	Assessed valuation per capita	Debt less sinking fund assets	Debt per capita	Percentage of net debt to assessed valuation
Alabama	\$566,807,488	\$253.00	\$13,132,375	\$5.95	2.32%
Arizona	140,338,191	608.00	3,064,818	13.28	2.18
Arkansas	427,473,108	258.00	1,236,066	0.76	.29
California	2,921,277,451	1,095.00	10,222,744	3.83	.35
Colorado	422,330,199	478.00	3,173,949	3.70	.75
Connecticut	1,041,334,019	881.00	7,110,451	6.12	.68
Delaware	93,814,011	451.00	763,122	3.70	.81
Florida	212,887,518	258.00	619,199	0.77	.29
Georgia	842,358,342	308.00	6,934,202	2.57	.82
Idaho	167,512,157	442.00	2,143,314	5.92	1.28
Illinois	2,343,673,232	397.00	2,272,620	0.39	.10
Indiana	1,898,307,218	688.00	1,350,305	0.49	.07
Iowa	902,092,597	406.00	356,670	0.16	.04
Kansas	2,746,900,291	1,630.00	243,121	0.14	.008
Kentucky	1,031,174,033	441.00	4,441,867	1.90	.43
Louisiana	550,517,808	315.00	13,546,150	7.89	2.46
Maine	416,891,264	550.00	1,254,998	1.67	.30
Maryland	1,235,457,607	929.00	7,333,913	5.56	.59
Massachusetts	4,803,078,625	1,353.00	79,551,090	22.78	1.66
Michigan	2,317,561,654	789.00	7,089,092	2.41	.31
Minnesota	1,474,585,315	676.00	1,345,290	0.63	.09
Mississippi	411,551,004	219.00	4,460,519	2.41	1.08
Missouri	1,860,087,956	555.00	4,671,218	1.40	.25
Montana	346,550,585	827.00	1,512,874	3.73	.44
Nebraska	463,371,889	376.00	374,394	0.31	.08
Nevada	101,087,082	1,067.00	607,695	6.70	.60
New Hampshire	439,683,132	1,007.00	1,955,611	4.50	.44
New Jersey	2,490,490,532	906.00	642,069	0.24	.03
New Mexico	72,457,454	196.00	1,218,209	3.41	.68
New York	11,131,778,017	1,146.00	86,205,247	9.05	.77
North Carolina	747,500,632	324.00	8,058,430	3.54	1.08
North Dakota	293,048,119	443.00	820,424	1.20	.31
Ohio	6,481,059,158	1,305.00	5,142,042	1.05	.08
Oklahoma	1,193,655,846	616.00	6,930,243	3.74	.58
Oregon	905,011,679	1,196.00	30,852	0.04	.003
Pennsylvania	5,068,802,988	625.00	—	—	—
Rhode Island	619,010,208	1,068.00	5,126,815	9.02	.83
South Carolina	291,531,003	185.00	6,190,036	3.98	2.12
South Dakota	354,278,413	551.00	370,000	0.58	.10
Tennessee	625,686,792	280.00	11,811,640	5.32	1.89
Texas	2,532,710,050	607.00	4,656,499	1.14	.18
Utah	200,299,207	495.00	1,429,694	3.62	.71
Vermont	221,530,142	615.00	569,006	1.58	.26
Virginia	864,962,621	406.00	22,043,145	10.46	2.55
Washington	1,005,086,251	747.00	1,556,012	1.21	.15
West Virginia	1,168,012,658	894.00	—	—	—
Wisconsin	2,466,636,703	1,019.00	2,251,000	0.93	.09
Wyoming	180,750,630	1,107.00	122,375	0.77	.07

* Assessed valuation of all property subject to *ad valorem* taxation. There was in many States a large increase in assessed valuation in 1913. Among these States may be mentioned Alabama, Colorado, Idaho, Kentucky, and South Dakota. (See *State and City Supplement of the Commercial and Financial Chronicle*, May 29, 1915.)

is to-day. In 1790,¹ the National Government arranged to assume state debts incurred largely for the Revolutionary War, and did actually assume \$18,271,786.47 of these debts. Between 1790 and 1820, the States

Changes in total of state debts 1790-1913

¹ Act approved August 4, 1790, 1st Cong., 2d Sess. (1 Stat. L. chap. XXXIV, p. 139.)

incurred only a small amount of debt. From 1820 to 1830, they issued bonds amounting to \$26,470,417, and from 1830 to 1838, \$147,836,577.¹ The Civil War brought a large increase in the debts of many of our States.² For the years from 1870 to 1913 inclusive, the table³ on page 101 shows the total debts, net debts, and net debts *per capita* of all the States.

As may be seen from the table, the total debt less sinking-fund assets of all our States in 1913 actually was less than in 1870. The lowest point was reached in 1895, after which there was a gradual increase until 1913, when an unusual increase took place. This was due probably to the exceptional demand for securities of the class of state bonds and to the tendency of certain States in recent years to issue large amounts of bonds for roads, canals, and other improvements. Owing to the rapid increase in population, the *per capita* increase has not always followed closely the absolute increase. The lowest net debt *per capita* for the period covered by the table was reached in 1909 and the highest in many years in 1913. On the whole, as stated above, the aggregate debt of our States may be spoken of as moderate.

This comparative freedom of our States from debt has been the result, in most cases, of long and sometimes bitter experience. At some time in their history, twenty of our States, including some of our best Northern States, have defaulted the interest on their bonds or compromised or repudiated the principal.

When we remember that it is impossible in the present condition of the law to force a State to pay its bonds, the record of the different States in the payment of their obligations becomes of commanding importance.

There were three periods of default, compromise, or repudiation: (1) From 1840-42, when Pennsylvania, Maryland, Indiana, Illinois, and Michigan, as well as Florida, Mississippi, and Arkansas defaulted; (2) from 1848-60, when Minnesota, Texas, and California began certain adjustments of their debts; and (3) from the beginning of the Civil War down to the early nineties, when Virginia, North Carolina,

¹ *Tenth Census*, vol. VII, p. 523.

² *Ibid.*, pp. 530, 537, 554.

³ *National and State Indebtedness, 1870-1913*, p. 18.



STATE BONDS

101

South Carolina, Georgia, Florida, Alabama, Tennessee, Louisiana, Arkansas, and Missouri defaulted on or compromised their bonds. In this period also arose the difficulties between Virginia and West Virginia.

TOTAL AND NET DEBT AND NET DEBT PER CAPITA OF
ALL THE STATES, 1870-1913

Year	Total Debt	Sinking-Fund Assets	Debt less Sinking-Fund Assets	
			Amount	Per Capita
1870.....	\$352,866,698	(¹)	\$352,866,698	\$9.15
1880.....	306,016,561	\$31,270,789	274,745,772	5.48
1891.....	258,195,056	46,984,569	211,210,487	3.37
1892.....	249,266,723	43,518,777	205,747,946	3.14
1893.....	240,175,835	38,124,440	202,051,395	3.03
1894.....	233,146,225	37,429,077	196,194,208 ²	2.88
1895.....	225,488,146	31,271,660	194,216,486	2.80
1896.....	226,702,714	28,123,908	198,578,806	2.81
1897.....	237,043,590	28,358,779	208,684,811	2.90
1898.....	253,957,941	30,049,746	223,908,195	3.06
1899.....	261,118,967	32,602,117	228,571,048 ³	3.07
1900.....	265,133,041	29,821,060	235,453,594 ⁴	3.10
1901.....	262,247,074	33,856,273	228,478,997 ⁵	2.95
1902.....	274,148,756	34,859,467	239,369,271 ⁶	3.03
1903.....	266,926,910	34,791,189	232,135,721	2.88
1904.....	272,493,578	36,846,091	235,647,487	2.86
1905.....	278,135,397	39,264,804	238,870,593	2.85
1906.....	281,411,192	42,952,929	238,458,263	2.79
1907.....	279,768,751	44,501,415	235,267,336	2.70
1908.....	290,029,635	50,655,306	239,374,329	2.70
1909.....	300,494,024	59,355,095	241,138,929	2.67
1910.....	322,948,868	66,813,710	256,143,276 ⁷	2.78
1911.....	347,041,081	71,177,988	275,919,983 ⁸	2.95
1912.....	376,114,098	76,451,848	299,763,423 ⁹	3.15
1913.....	422,796,525	76,980,571	345,942,305 ¹⁰	3.57

¹ Not reported. ² Sinking fund exceeds debt \$477,150 — Rhode Island.

³ Sinking fund exceeds debt \$54,198 — New Jersey.

⁴ Sinking fund exceeds debt \$141,613 — New Jersey.

⁵ Sinking fund exceeds debt \$88,196 — New Jersey.

⁶ Sinking fund exceeds debt \$79,982 — New Jersey.

⁷ Sinking fund exceeds debt \$8,118 — Pennsylvania.

⁸ Sinking fund exceeds debt \$55,990 — Pennsylvania.

⁹ Sinking fund exceeds debt \$101,173 — Pennsylvania.

¹⁰ Sinking fund exceeds debt \$120,351 — Pennsylvania.

The earliest period of default followed the financial crisis of 1837-39. At the beginning of 1830, the debts of the States were only about \$13,000,000. In 1834, the last installment of the United States debt was paid — an act which firmly established our credit abroad. In view of the fact that the States did a large part of their borrowing in London, the importance of this becomes apparent. Provision was made in 1836 for distribution of the surplus revenues of the United States among the several States.¹ Furthermore, the period was a prosperous one all over the world. There had been in our country a real and substantial growth, although the population and resources of the Western States were small. These favorable factors were magnified by other influences of a more doubtful character. The fight between the United States Government and the United States Bank caused the chartering of large numbers of state banks all over the country. Paper money became abundant, and a spirit of speculation permeated the whole country. "Men acted as if a short and secure road to wealth had been discovered, on which all might travel, and he who went the fastest would be the first to reach the desired end."² The States borrowed money generously and spent it lavishly. Internal improvements were undertaken on a huge scale. Rashness became "epidemic." Before the crash came, high prices for practically everything prevailed. Then, more or less suddenly, the Bank of England stopped the credit of several American banking houses in London. Suspension of specie payments soon followed, then a short renewal, and then a second suspension. Not only the Bank of the United States in Pennsylvania, but every bank south of Philadelphia, stopped payment. By 1840 many of our States were in financial difficulties.³

In the following pages we shall attempt to give a short debt history of all the defaulting States. So far as we know, this is the only collected history, written from sources and brought up to date, which includes all the States

Complete short
debt history of
defaulting
States

¹ *Tenth Census*, vol. VII, p. 529.

² *North American Review*, January, 1844, p. 114.

³ *Ibid.*, pp. 110-22. See also *Bankers' Magazine and Statistical Register*, November, 1849, pp. 341-43. For a short discussion of the origin and development of the internal improvement idea, see Dewey, *Financial History of the United States* (New York, 1915), pp. 212-16.

at one time or another defaulting on their bonds. In view of the fact that the experiences of many of these States have been more or less similar, some readers may prefer to follow the histories only of such States as interest them. The very similarity, however, of so many of the debt histories makes all the clearer the lessons to be learned. Not only the reasons for default are established, but the way in which the bondholders fared in final settlement.

August 1, 1842, Pennsylvania defaulted interest on its bonds.¹ In 1825, the State had entered upon an important system of internal improvements. Under the impulse of ^{Pennsylvania} an act² passed in 1836 to charter the United States Bank, — which act also repealed the state tax on real and personal property, — a new series of improvements was begun. Bonds were issued, largely in aid of railroads and canals, until in 1842 the state debt had reached \$37,319,395. After the panic of 1837, work on the state improvements ceased, and many of the properties passed into private hands. For a large part of its debt, the State obtained nothing whatever. Furthermore, it was obliged to receive in payment of revenues its own "relief notes" or depreciated currency. Under this combination of unfavorable circumstances, the State was unable to pay interest in cash.

It issued for interest, however, 6% certificates or scrip.³ At one time something over \$3,000,000 of principal was overdue. Improved methods of assessment and a revision of the tax laws enabled the State to resume interest payments in February, 1845. At first, these payments were made to a considerable extent in "relief notes." In 1848, only a small amount of these notes remained outstanding.⁴ In 1857 and 1858, provision was made for retirement of a considerable portion of the principal of the debt through sale of railroad and canal property.⁵

In January, 1842, Maryland failed to pay interest on its debt. Like Pennsylvania, Maryland had breathed in the ^{Maryland} spirit of unbounded optimism which prevailed in the ten or a dozen years preceding 1837. It had subscribed to the

¹ *North American Review*, January, 1844, p. 122.

² *Laws of Pennsylvania* (1835-36), no. 22.

³ See *Laws of Pennsylvania* (1842), no. 127.

⁴ For above account, see Hunt's *Merchants' Magazine*, March, 1849, pp. 257-68.

⁵ See *Tenth Census*, vol. VII, p. 544.

stocks of various railroads, including the Baltimore and Ohio, and had loaned money to and purchased the stock of the Chesapeake and Ohio Canal. At the time when the State was using thus its credit, it had no system of taxation whatever. It depended solely on the income of the public works, or else on the sale of additional bonds, to meet the interest on its debt. The general insolvency following the panic of 1837 caused a suspension of the canal works for some years. The income from all the improvements was far less than the amount necessary to pay interest on the state debt, and the State was unable to negotiate further bonds abroad.

To meet this situation, laws were passed in 1841 and 1842¹ providing for a direct tax. The lack of a proper system for collecting the taxes, however, together with the difficulty of the times, made this measure ineffective. When the State found itself unable to pay interest, it received coupons in payment of taxes. From 1844 to 1846, it made partial payments on interest current and accrued. Later, it funded arrears of interest with 6% bonds. On January 1, 1848, it resumed current interest on its public debt in full. Although at one time some people in the State had shown a leaning toward repudiation,² the record of Maryland as it was written was such as to inspire confidence in its good faith.³

Indiana suspended interest payments after January, 1840. In keeping with the spirit and practice of the times, the State had issued bonds in aid of the Wabash and Erie Canal, the State Bank of Indiana, and other private enterprises. The negotiation of the bonds had been a source of "fearful jobbing" and had resulted in serious losses to the State. When in 1839 it became impossible to borrow more money, the public works were suspended and many of them were surrendered or abandoned. It was impossible to collect from the small farmers, who made up most of the population at this time, sufficient taxes to meet the interest on the heavy debt. At the time of default there was also a consider-

¹ *Laws of Maryland*, vol. 20 (1841), chap. 23; *ibid.*, vol. XXI (1842), chap. 116; *ibid.*, chap. 328.

² For above account, see *North American Review*, January, 1844, pp. 125-27, and Hunt's *Merchants' Magazine*, May, 1849, pp. 483-89.

³ In 1837, when banks had suspended specie payments, Maryland paid its interest in gold or silver or its equivalent. (Hunt's *Merchants' Magazine*, May, 1849, p. 487.)

able amount of State paper outstanding receivable for taxes. The tender of this prevented, of course, the receipt of money available for interest.

To settle the interest, state bonds bearing 7% interest and redeemable in five years were offered, but of these only a trifling amount were accepted. The principal and back interest of the debt finally were settled by an act passed January 19, 1846, and amended January 27, 1847.¹ These acts provided that one half the old debt and interest should be taken care of with new bonds payable from taxation and the other half with certificates payable from the property and tolls of the Wabash and Erie Canal.² Cash interest payments on state bonds were resumed at the rate of 4% July 1, 1847.³

July, 1841, Illinois stopped payment of interest on its debt. An act⁴ for an immense system of internal improvements had been passed in 1837. Bonds had been issued for railroads, bank-stocks, and the Illinois and Michigan Canal. Illinois

When "the great revulsion overtook the commercial world," all work on the public improvements stopped. Many banks which had bought state bonds failed, "and the State never got anything." Banks to whose capital the State had subscribed finally were wound up "with total loss of capital." The State was obliged, moreover, to receive its own depreciated paper for public dues. In 1844, the total debt, including interest, was given by the Governor as \$14,440,381.⁵ Like Indiana, Illinois at this time simply was unable to pay.⁶

Within a few years, however, the Illinois and Michigan Canal was completed, interest on that part of the state debt was paid to date, and the process of discharging the principal was begun.⁷ To

¹ *General Laws of Indiana* (1845-46), chap. 1; *ibid.* (1847), chap. 1.

² The canal was completed and for a time paid promptly interest on the certificates. Later, however, it proved a failure. (See *Tenth Census*, vol. VII, pp. 621-22, and *Commercial and Financial Chronicle*, vol. 19, p. 493.)

³ For above account, see Hunt's *Merchants' Magazine*, August, 1849, pp. 150-60.

⁴ *Public Laws of Illinois* (1836-37), pp. 121-52 Supplemental Act. *Ibid.*, pp. 152-53. (Both approved March 4, 1837.)

⁵ Hunt's *Merchants' Magazine*, December, 1852, pp. 661-64; *ibid.*, March, 1858, p. 278.

⁶ *North American Review*, January, 1844, p. 127.

⁷ Hunt's *Merchants' Magazine*, March, 1858, p. 279.

take care of the state debt other than the canal debt, annual taxes were provided.¹ January 1, 1857, the Governor of the State declared that during the past four years \$4,564,800.40 had been paid in liquidation of the public debt as well as interest on the principal during that time. "There is now no doubt about the State being prepared to pay the interest upon her whole debt as it matures in future."² The record of Illinois is one of delayed payments, but of payments in full.

Michigan defaulted in its interest payments July 1, 1841.³ The Constitution of the State adopted at the time of the admission of the State to the Union urged the construction of a system of internal improvements.⁴ In 1837, the Legislature projected a system of improvements, including railroads, canals, and river improvements, exceeding both the means and the needs of the people. A loan of \$5,000,000 was authorized for these objects.⁵ The State was to sell its bonds through an "agent" — the Morris Canal and Banking Company of New York — and to receive payment in installments. Under this arrangement, the State marketed \$1,362,000 of its bonds at par less a commission of $2\frac{1}{2}\%$. The agent was unable to settle for the remaining \$3,638,000 bonds. These bonds, with \$200,000 railroad-aid bonds, were then sold to the United States Bank at Philadelphia and the Morris Canal and Banking Company on time. Both concerns failed and the State received only \$998,000. The State was unable to meet its interest, and work on the public improvements was stopped.

In settlement, Michigan agreed to acknowledge as much of its debt as it had received payment for in full. For interest on this from July 1, 1841, to July 1, 1845, it issued new 6% bonds.⁶ Bonds for which the State had received no payment were to be canceled.

¹ *Const. Ill.* (1848), art. xv. This part of the debt had been funded to a large extent under an act passed in 1847. (See *Public Laws of Illinois* [1846-47], pp. 161-65.)

² Hunt's *Merchants' Magazine*, May, 1857, p. 545.

³ *North American Review*, January, 1844, p. 134.

⁴ *Constitution of Michigan* (1835), art. XII, sec. 3.

⁵ Hunt's *Merchants' Magazine*, February, 1850, pp. 133-34. Act approved March 21, 1837, as amended by act approved November 15, 1837. (*Laws of Michigan* [1837], no. 77; *ibid.* [1837-38], no. 1.)

⁶ Hunt's *Merchants' Magazine*, February, 1850, pp. 136-37. Act approved March 8, 1843. (*Laws of Michigan* [1843], no. 73.)

In settlement of bonds for which the State had received only partial payments, it arranged to issue new bonds for the amount received by the State, together with interest, but less damages for non-payment.¹ The amount actually received on part-paid bonds was ascertained to be \$302⁷⁸/₁₀₀ per \$1000. Later, the State sold certain railroads and accepted payment in state bonds on the basis of the above settlement.² The weak point in Michigan's record arises from the fact that part-paid bonds had been pledged by the United States Bank in Pennsylvania to secure loans from various banking houses in Europe, and appeared to be in the hands of innocent purchasers.³

After January 1, 1840, the then Territory of Florida paid no interest on an issue of bonds of the Bank of Pensacola endorsed by the Territory. In addition to this endorsement, Florida had issued bonds to supply the capital of the ^{Florida} Union Bank of Florida, and later, bonds in behalf of the Southern Life Insurance and Trust Company.⁴ In 1837, the banks suspended specie payments and soon after were found to be hopelessly insolvent. The population of Florida in 1840 was only about 50,000, and the liabilities of the Territory fairly heavy.⁵ The bonds referred to the Territorial Legislature later repudiated.⁶ The Constitution of the State, adopted before the admission of Florida to the Union, denied to the Legislature the power of laying any tax for the purpose of paying the bonds which were issued by the Territory.⁷

Again, in 1873, the Legislature refused to make provision for certain state bonds in default — notably \$4,000,000 bonds issued to the Jacksonville, Pensacola, and Mobile Railroad Company.⁸ At this time Florida had a funded and floating debt of nearly twenty per cent of its total assessed valuation. The taxes collected

¹ See *Laws of Michigan* (1842), no. 60, and *ibid.*, p. 172 (Joint Resolution no. 38).

² *Hunt's Merchants' Magazine*, February, 1850, pp. 138-39. See *Laws of Michigan* (1842), no. 60.

³ *North American Review*, January, 1844, pp. 136-37.

⁴ *Bankers' Magazine*, December, 1857, pp. 449-50.

⁵ *Tenth Census*, vol. VII, p. 587.

⁶ *Bankers' Magazine*, December, 1857, p. 450.

⁷ *Constitution of Florida* (1838; effective March 3, 1845), art. VIII, sec. 2.

⁸ *Commercial and Financial Chronicle*, vol. 16, p. 387. *Tenth Census*, vol. VII, pp. 588-89. Part of these bonds were for the benefit of the Florida Central Railroad.

had proved insufficient for the requirements of the State.¹ Furthermore, a good deal of railroad property had been destroyed during the Civil War.²

Yet the method of escape chosen and the excuse given were characteristic. The Attorney-General of the State declared that there was no provision by law for assessing a tax to pay either principal or interest on state bonds issued to the Jacksonville, Pensacola, and Mobile Railroad. He alleged fraud and illegality, and declared that the Legislature never would authorize a tax to pay the bonds.³ The Supreme Court of Florida sustained the Attorney-General and the Legislature in the repudiation.⁴ In 1912, the Council of the Corporation of Foreign Bondholders, London, listed \$7,000,000 old bonds of Florida in default.⁵

After July 1, 1840, Mississippi paid no interest on \$2,000,000 bonds put out to subscribe to the stock of the Planters' Bank,⁶ and in 1842, repudiated, on the ground of illegality and alleged fraud, a \$5,000,000 issue put out to promote the Union Bank.⁷ Both the Planters' Bank and the Union Bank failed.⁸ It was for this reason rather than from inability to pay that Mississippi refused to recognize its bonds. The resources of the State were ample.⁹ Furthermore, in the case of the Union Bank bonds, the Legislature of 1839 had resolved "that the sale of the bonds was highly advantageous to the State and the bank."¹⁰ There were no substantial grounds of illegality in either case. The State Court of Errors and Appeals had held the Union Bank bonds

¹ *Commercial and Financial Chronicle*, vol. 16, p. 187, and vol. 17, p. 19.

² *International Review*, November, 1880, p. 579.

³ *Commercial and Financial Chronicle*, vol. 17, p. 323.

⁴ *Holland v. The State of Florida et al.*, 15 Florida, 455 (1876).

⁵ *Thirty-ninth Annual Report*, Council of the Corporation of Foreign Bondholders, p. 365.

⁶ *Bankers' Magazine*, January, 1853, p. 497, and November, 1849, p. 342. December 2, 1852, the people voted against paying these bonds. (*Bankers' Magazine*, January, 1853, p. 499.)

⁷ *North American Review*, January, 1844, p. 132. *Thirty-eighth Annual Report*, Council of the Corporation of Foreign Bondholders, p. 388.

⁸ *Bankers' Magazine*, December, 1846, p. 339. *Thirty-eighth Annual Report*, Council of the Corporation of Foreign Bondholders, pp. 39-40. *North American Review*, January, 1844, p. 130.

⁹ *Bankers' Magazine*, December, 1850, pp. 454-56, and *ibid.*, November, 1849, p. 349.

¹⁰ *North American Review*, January, 1844, p. 132.

valid obligations of the State, and the legality of the Planters' Bank bonds was not seriously questioned.¹

The Constitution of Mississippi, as amended in 1876, prohibited the State from ever paying the Union Bank bonds or the Planters' Bank bonds.² Judge Curtis long ago wrote laconically that, in the payment of debts, there was a great difference between "the people of Mississippi and the people of Massachusetts."³ Mississippi can claim the honor of inventing the word "repudiation" in the sense in which it is now used.⁴

Arkansas was in default in 1841.⁵ The State had issued bonds in aid of the State Bank of Arkansas and the Real Estate Bank of Arkansas.⁶ Later, the banks were placed in liquidation by an act of the Legislature.⁷ For many ^{Arkansas} years, no interest was paid on the public debt. This was not due to lack of resources nor was it owing to any well-grounded claims of fraud. In 1845, the unpaid interest on the state debt amounted at least to as much as the principal. A moderate tax would have sufficed to take care of the accruing interest, yet such a tax the Legislature refused to levy.⁸

In 1869, an act⁹ was passed for funding a portion of the state debt with new 6% bonds. By the close of 1870, Arkansas again had increased its debt by issuing bonds for building levees and over \$5,000,000 bonds in aid of railroads.¹⁰ Some of the levee bonds issued to contractors were sold by them as low as twenty-six to twenty-seven cents on the dollar.¹¹ In 1873, all the aided railroads defaulted in interest, and the State did likewise.¹² On January 1, 1878, the total debt of Arkansas had reached a figure of nearly twenty per cent of the assessed valuation of the State.¹³

¹ *Bankers' Magazine*, November, 1853, p. 432. *Thirty-eighth Annual Report*, Council of the Corporation of Foreign Bondholders, pp. 386 and 388.

² *Constitution of Mississippi*, art. XII, sec. 5, as amended January 18, 1876. See *Constitution of 1890*, art. XIV, sec. 258.

³ *North American Review*, January, 1844, p. 133.

⁴ See *Bankers' Magazine*, December, 1846, p. 339.

⁵ *Bankers' Magazine*, December, 1854, p. 488.

⁶ *Hunt's Merchants' Magazine*, May, 1857, p. 542.

⁷ *Tenth Census*, vol. 7, p. 603. ⁸ *Bankers' Magazine*, December, 1854, p. 488.

⁹ *Acts of Arkansas* (1868-69), no. 55.

¹⁰ *Commercial and Financial Chronicle*, vol. 27, p. 15, and vol. 36, p. 706.

¹¹ *Ibid.*, vol. 14, p. 85.

¹² *Ibid.*, vol. 36, p. 706, and vol. 40, p. 119.

¹³ *Commercial and Financial Chronicle*, vol. 25, p. 161.

In the same year, the Supreme Court of the State, on technical grounds, held the levee bonds unconstitutional and void.¹ The state legislature repudiated all the railroad bonds because "authorized by alien adventurers"² — the so-called "carpet-baggers" from the North. This action was confirmed by the Supreme Court of the State.³ Against certain bonds included in the funding of 1869, and known as "Holford" bonds, the people of Arkansas later charged fraud.⁴ In 1885, an amendment to the Constitution of the State prohibited levying a tax or making an appropriation to pay interest or principal of the Holford bonds, the railroad-aid bonds, and certain of the levee bonds.⁵ In March, 1887, the Legislature passed an act⁶ providing for the "undisputed" debt, interest on which had been in default since 1872. Under an act passed in 1899, provision was made for refunding the recognized debt with an issue of 3% thirty-year bonds.⁷ The principal of the debt of Arkansas unprovided for in 1912 has been given as \$8,706,773.⁸

The second period during which there broke out difficulties with state bonds — between 1848 and 1860 — was of minor importance. The troubles of Texas began before it was annexed to the United States, and the difficulties of California proved to be largely a question of legality and not of inability or unwillingness to pay. The case of Minnesota was the only one resembling many of the earlier and many of the later defaults.

An amendment⁹ to the constitution of Minnesota adopted November 6, 1860, provided that no law for the payment of prin-

¹ *Smithee v. Garth*, 33 Ark. 17.

² *Commercial and Financial Chronicle*, vol. 31, p. 303.

³ *State of Arkansas v. Little Rock, Mississippi River, and Texas Railway Company*, 31 Ark. 701.

⁴ *Commercial and Financial Chronicle*, vol. 33, p. 328. For history of "Holfords," see *Tenth Census*, vol. 7, p. 603.

⁵ *Constitution of Arkansas* (1874), Amendment no. 1, adopted January 14, 1885.

⁶ *Acts of Arkansas* (1887), p. 269, Act CXLVI. *Commercial and Financial Chronicle*, vol. 44, p. 421, and vol. 40, p. 119.

⁷ *Acts of Arkansas* (1899), p. 269, Act CXLVIII.

⁸ *Thirty-Ninth Annual Report*, Council of the Corporation of Foreign Bondholders, p. 365.

⁹ *Constitution of Minnesota* (1860), art. IX, sec. 2, as amended November 6, 1860. See *General Statutes of Minnesota* (1866), p. 37.

capital or interest of \$2,275,000 state bonds issued in aid of railroads should take effect until ratified by popular vote.

The railroads, which had turned over first-mortgage ^{Minnesota} bonds to the State, had become insolvent. When partially completed, they had found themselves unable either to negotiate their own securities except at "ruinous rates" or to sell any considerable amount of state bonds issued for their benefit.¹ In 1862, the State granted to the railroad companies title to lands and other property free and clear.² Some of the state bonds had gotten into the hands of contractors and other innocent holders.³ For many years, the State refused to recognize any of this debt. At one time the "Grangers" and later the national "Greenback-Labor" party were prominent among the repudiators. One "Granger" not only wanted elected judges pledged to "wipe out the bonds," but was ready to "wipe out the Supreme Court" of the United States if that court should by any chance declare the bonds an obligation of the State. According to good opinion, the State was able to pay its entire railroad debt without serious inconvenience.⁴

In 1881, the Supreme Court of the State held invalid the constitutional amendment repudiating the bonds,⁵ and thereby left to the legislature authority to settle the debt. At a special session of the legislature called September 19, 1881, an act⁶ was passed providing for the settlement of the old debt on the basis of fifty cents on the dollar of cash or new 5% bonds for old 7% bonds and interest. On January 14, 1882, all but \$108,000 of the \$2,275,000 state railroad bonds had been paid at this rate in new bonds or cash.⁷

The state legislature of Texas in 1848 passed an act⁸ to provide for ascertaining and auditing the debt of the late ^{Texas} Republic of Texas — interest on which was in default. When Texas seceded from Mexico in 1835, it had a popula-

¹ *Tenth Census*, vol. VII, pp. 633-34.

² *Special Laws of Minnesota* (1862), chaps. XVII and XX, pp. 226 and 247.

³ Scott, *The Repudiation of State Debts* (New York and Boston, 1893), p. 155.

⁴ Lalor's *Cyclopædia of Political Science* (Chicago, 1884), vol. III, p. 608.

⁵ *State v. Young*, 29 Minn. 474.

⁶ *Laws of Minnesota* (1881, extra session), chap. 1.

⁷ *Tenth Census*, vol. VII, p. 634. For interesting data bearing especially on the legality of the Minnesota railroad debt, see *Minnesota State Bonds* (New York, 1871).

⁸ *Laws of Texas* (1848), vol. II, chap. 143.

tion of less than 140,000, of whom only about one third were white — the balance being principally Indians. The Republic had its independence to maintain, Indian marauders to keep off, and the other expenses of government to meet.¹ For a large part of its debt, it was claimed, Texas had not received anywhere near face value. The state authorities divided the debt into three classes on the basis of the estimated value of the claims. The entire amount, including interest, was given as \$9,647,253.14, to which was assigned a value of \$4,807,764.37.

On this basis it was proposed to settle the debt. When Texas had become a State, the United States had possessed itself of certain customs resources which had been pledged to secure the debt of the Republic.² In the Texas "boundary bill,"³ the United States, for the sake of including in New Mexico certain territory claimed by Texas, agreed to pay Texas \$10,000,000 in 5% bonds, provided that only \$5,000,000 should be issued until creditors of Texas had released the United States from all claims on account of customs pledged. The second five million never was received because the State could not comply with the conditions.⁴ February 28, 1855, the United States appropriated \$7,750,000 in cash and apportioned it among those creditors of Texas claiming against the United States.⁵ At the close of 1856, the State was declared to be out of debt.⁶

California was in default in interest in January, 1854.⁷ The early debt had been incurred largely for State expenses.⁸ In 1856, the Supreme Court of the State declared all the surplusage of indebtedness above the \$300,000 limit

¹ State and City Supplement of the *Commercial and Financial Chronicle*, April 29, 1893, p. 175.

² *Tenth Census*, vol. VII, pp. 600-01.

³ Acts of 31st Congress, 1st Sess., chap. XLIX, approved September 9, 1850 (9 U.S. Stat. at Large, p. 446). *Tenth Census*, vol. VII, p. 601.

⁴ State and City Supplement of the *Commercial and Financial Chronicle*, April 29, 1893, p. 176.

⁵ Acts of 33d Congress, 2d Sess., chap. CXXIX, approved February 28, 1855 (10 U.S. Stat. at Large, p. 617.) See *Laws of Texas* (1855-56), chap. L. For laws of Texas passed to settle debt, see *Laws of Texas* (1849-50), chap. CLVII; *ibid.* (1851-52), chaps. I, XCVIII, CV. Various subsequent provisions were made for the same purpose.

⁶ *Tenth Census*, vol. VII, p. 601.

⁷ *Bankers' Magazine and Statistical Register*, December, 1854, p. 488.

⁸ *Tenth Census*, vol. VII, p. 644.

fixed by the Constitution of 1849 null and void.¹ In April, 1857, the legislature passed an act² calling in the various illegal issues and authorizing \$3,900,000 new bonds to be exchanged for the old. In April, 1860, another act³ was passed authorizing \$200,000 additional bonds to adjust an error in the original refunding.

The third period of difficulties with state bonds — from the time of the Civil War down to the early nineties — may be called the true period of repudiation. It is concerned only with the Southern States.⁴ The causes of the defaults and repudiations of most of the Southern States during this period were in part the same and in part different from the causes of the earliest defaults discussed above. There was the same lack of understanding of the proper purposes for which state debts should be created and the same inadequate idea of the proper management of state finances. There was in addition the weakening of the South by the Civil War. Before the war, the Southern States, as a whole, were wealthy and prosperous. In 1860, the total assessed valuation of Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, Tennessee, and Missouri was \$4,332,901,458, and in 1880 the total assessed valuation of the same States, with the addition of West Virginia, was \$2,232,790,584.⁵ This was partly owing to the removal of slaves from the list of taxable property and partly owing to a general undervaluation of property.⁶ There was, however, a real loss from the point of view of raising taxes.

Third period
of default,
compromise
or repudiation

In addition to the economic weakening of the South on account of the war, there was in most of the States so-called "carpet-bag" government with all its incompetency and dishonesty. As far as

¹ *Nougues v. Douglass et al.*, 7 Cal. 65. *Constitution of California* (1849), art. viii.

² *Statutes of California* (1857), chap. cxxliv, approved April 28, 1857.

³ *Ibid.* (1860), chap. cccxiii, approved April 30, 1860.

⁴ The Fourteenth Amendment, section 4, of the Constitution of the United States, ratified by three fourths of the States before the close of 1868, reads: "But neither the United States, nor any State shall assume or pay any debt or obligation incurred in aid of insurrection or rebellion against the United States, or any claim for the loss or emancipation of any slave; but all such debts, obligations, and claims shall be held illegal and void."

⁵ *Tenth Census*, vol. vii, pp. 4 and 16.

⁶ See the *Tenth Census*, vol. vii, for estimated true values of property in the given States in 1860 and 1880.

misappropriations go, these have been referred to as not exceeding \$20,000,000.¹ The irregularities in the handling of state debts were so numerous and so complicated, however, that it is impossible to estimate with any accuracy the losses from this source. In this period Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Tennessee, Louisiana, Arkansas, and Missouri defaulted in interest or compromised or repudiated the principal of their bonds, and Virginia and West Virginia began the dispute about West Virginia's share of the ante-Civil War debt of Virginia. Some of the States for many years were in a condition of chronic default.

Virginia defaulted in interest July 1, 1861.² Previous to the Civil War, the State had met every liability for principal and interest "faithfully and promptly." The debt, contracted chiefly for railroads, canals, turnpikes, and public buildings, was described later as "free from the taint of extravagance, fraud, or doubt."³ On July 1, 1867, after settling for the back interest with new bonds, the State resumed cash interest payments at the rate of 4% and issued coupons or credited registered holders for the remainder of interest due.

January 1, 1869, the State again defaulted.⁴ The property of the people was much reduced, and the task of raising revenue under the conditions left by the war was not an easy one.⁵ By January 1, 1871, the debt, through accumulations of interest, had mounted to \$47,390,839.96.⁶ To meet the situation, the legislature passed the Funding Bill of 1871.⁷ This provided that for one third of the old debt and interest, except the 5% dollar bonds and the sterling bonds,⁸ a certificate should be issued payable in accordance with the settlement made between Virginia and West Virginia and that for the other two thirds there should be issued

¹ *North American Review*, August, 1884, p. 141.

² *Commercial and Financial Chronicle*, vol. 13, p. 139.

³ *North American Review*, February, 1882, p. 150. *Commercial and Financial Chronicle*, vol. 12, p. 360; vol. 14, p. 175.

⁴ *Commercial and Financial Chronicle*, vol. 13, p. 139.

⁵ *North American Review*, February, 1882, p. 151.

⁶ *Commercial and Financial Chronicle*, vol. 12, p. 360.

⁷ *Acts of Virginia* (1870-71), chap. 282.

⁸ The 5% dollar bonds were funded in the same way, but with new 5% bonds instead of 6%; and the sterling bonds were treated, with certain adjustments, on the same basis.

new 6% bonds payable in thirty-four years. The coupons on the new or "consolidated" bonds were to be receivable for taxes and other dues. Under this act there was exchanged something like two thirds of the old debt.¹

Then a new spirit came over Virginia's dreams. The so-called "Readjusters" appeared upon the scene.² In December, 1871, they put through the legislature a resolution for discontinuing the funding of the state debt.³ The State failed to pay interest due in January, 1872, although there were sufficient funds in the Treasury.⁴ The claim was made that the people were too poor to take care of the debt — a claim hardly borne out by facts.⁵ March 7, 1872, the legislature passed over the governor's veto an act⁶ repealing the receivability of coupons for taxes and other public dues. The legislature also agreed to pay 4% interest to holders of the "consolidated" bonds who acquiesced in the repeal of the tax-receivable feature of the coupons.⁷ This was the origin of the class of bonds known as "pealers."⁸ The Supreme Court of Appeals of Virginia, however, held that the State must receive the coupons for taxes.⁹

The panic of 1873 prostrated business and diminished the revenues of the State.¹⁰ In 1874, Governor Kemper in a message to the General Assembly declared the State unable to fulfill all the conditions of the Funding Act of 1871.¹¹ Default was made in interest January, 1874.¹² In 1879, the legislature passed an act known as the McCulloch Bill,¹³ which provided for refunding a part of the debt with new bonds bearing 3% interest for ten years, 4% for twenty years, and 5% for ten years. The coupons from these bonds were to be receivable for taxes. This act was acceptable to

¹ *Commercial and Financial Chronicle*, vol. 14, p. 151. Up to December 1, 1871, \$21,610,691 consols were issued. (*Tenth Census*, vol. VII, p. 557.)

² *North American Review*, February, 1882, p. 151.

³ *Commercial and Financial Chronicle*, vol. 13, p. 839.

⁴ *Ibid.*, vol. 14, pp. 51 and 175.

⁵ *Ibid.*, vol. 14, p. 175.

⁶ *Acts of Assembly* (1871-72), chap. 148.

⁷ *Commercial and Financial Chronicle*, vol. 14, p. 323.

⁸ See *American Law Review*, vol. XXIII, p. 927.

⁹ *Antoni v. Wright*, 22 Gratt., 833.

¹⁰ *North American Review*, February, 1882, p. 152.

¹¹ *Commercial and Financial Chronicle*, vol. 18, p. 350.

¹² *Ibid.*, vol. 18, p. 598.

¹³ *Acts of Virginia*, (1878-79, Special Session), chap. 24.

creditors, and under it a portion of the debt was exchanged for new "ten-forty dollar bonds."¹

Later, the political complexion of the Government changed, refunding ceased, and interest on the "ten-forties" was defaulted.² In 1880, the Supreme Court of Appeals of the State held the McCulloch law constitutional and the coupons receivable in full for taxes.³ The "Readjusters" triumphed, however, in 1882 with the enactment of two laws known as the "Coupon-Killers"⁴—the effect of which as interpreted was to prevent the receipt of any large amount of coupons for taxes—and a law known as the Riddleberger Act⁵ for the settlement of the debt. This act, after leaving to West Virginia provision for one third of the old debt (1861) or its equivalent, provided for scaling various classes of the remainder from 20% to 47%.

For many years, the bonds issued under this act were the only bonds of the State receiving interest in cash. The "consols" received no interest in cash and the "pealers" no interest at all from 1874, and the "ten-forties" received no cash interest after July, 1880.⁶ The bondholders made various unsuccessful attempts to obtain satisfactory terms.⁷ Finally, in 1891, after several months of negotiations, the bondholders and the representatives of the State arrived at a basis of settlement.⁸ After certain adjustments, the principal and interest of the state debt July 1, 1891, was determined to be \$28,616,972.98. The "Olcott Plan," allowing for a certain amount of bonds as probably lost, assumed the debt to be in round numbers \$28,000,000.⁹ In exchange for this, it proposed to issue \$19,000,000 new bonds payable in one hundred years and bearing 2% interest for ten years and 3% for ninety years. The coupons were not to be receivable for taxes. The different classes of bonds funded were to receive new "century"

¹ Up to October 1, 1879, there were issued of these \$8,049,450. (*Tenth Census*, vol. VII, p. 559.)

² *Seventh Annual Report*, Council of the Corporation of Foreign Bondholders, p. 66.

³ *Williamson v. Massey*, 33 Gratt. 237.

⁴ *Acts of Assembly* (1881-82), chaps. 7 and 41. See *Parsons v. Marye and others*, 23 Fed. Rep. 113 (Circuit Court, E. D. Virginia, Feb. 11, 1885).

⁵ *Acts of Assembly* (1881-82), chap. 84, approved February 14, 1882.

⁶ *Commercial and Financial Chronicle*, vol. 56, p. 636.

⁷ See *ibid.*, vol. 44, p. 627. ⁸ *Ibid.*, vol. 57, p. 565. ⁹ *Ibid.*, vol. 56, p. 636.

bonds in proportions varying from 60% to 75% of principal with similar adjustments for interest. This plan was embodied in an act approved February 20, 1892.¹ In December, 1893, Governor McKinney stated that \$24,547,358 old bonds had been received in exchange for new bonds and canceled. Four semiannual interest payments had been met promptly.² Later, the reduction of the debt was begun through purchases of bonds for the sinking fund.³ The debt history of Virginia since the Civil War has been a checkered one.

The constitution of West Virginia, adopted in 1863, provided that West Virginia should assume an "equitable portion" of the public debt of Virginia as it was before January 1, 1861.⁴ Later negotiations for an adjustment of the West Virginia debt were begun between the two States.⁵ March 30, 1871, the legislature of Virginia passed a funding bill⁶ which provided, among other things, that one third of the old Virginia debt should be funded with certificates payable in accordance with the settlement thereafter made between the two States. Virginia claimed that \$15,239,370.74 properly was chargeable to West Virginia on the ground that the new State contained one third of the territory and population of the old State.⁷ West Virginia, on the other hand, claimed that her share was not over \$953,360.23 on the basis of the net amounts expended and invested in her territory up to January 1, 1861.⁸ The negotiations dragged on for years.⁹

In March, 1911, however, the United States Supreme Court held West Virginia liable for a principal debt of \$7,182,507.46 and

¹ *Acts of Assembly* (1891-92), chap. 325, as amended by *Acts of Assembly* (1893-94), chap. 110, and by *Acts of Assembly* (1897-98), chaps. 113 and 287. See *Commercial and Financial Chronicle*, vol. 56, p. 802; vol. 57, p. 1053. The time for accepting the Olcott settlement was extended from time to time until December 31, 1914, with authority given to the sinking-fund commissioners to extend one year more. (State and City Section, *Commercial and Financial Chronicle*, November 21, 1914, p. 169.)

² *Commercial and Financial Chronicle*, vol. 57, p. 1053. ⁶ *Ibid.*, vol. 58, p. 357.

³ *Constitution of West Virginia* (1863), art. VIII, sec. 8.

⁴ *Tenth Census*, vol. VII, p. 564.

⁵ *Acts of Virginia* (1870-71), chap. 282.

⁷ *International Review*, November, 1880, p. 568. *Tenth Census*, vol. VII, pp. 564-65.

⁸ *Tenth Census*, vol. VII, p. 565.

⁹ See *Commercial and Financial Chronicle*, vol. 56, p. 637; vol. 58, pp. 51 and 444.

left the question of interest for adjustment between the parties.¹ The commissioners of the two States again failed to agree.² In June, 1914, the United States Supreme Court ordered a special master to take additional testimony.³ On June 14, 1915, the court sustained in practically every particular the findings of the master. Allowing for a net credit to West Virginia as of January 1, 1861, of \$2,966,885.18 and adding to the principal of the debt \$8,178,307.22 for interest up to July 1, 1915, the court held the total amount due by West Virginia as \$12,393,929.50. The court ordered a charge of 5% interest on the total amount awarded by the decree from the date of entry until the debt be paid. It ordered costs divided evenly between the two States. Whether the legislature of West Virginia settles in accordance with the decision of the Supreme Court remains to be seen.⁴

In 1868, North Carolina settled the back interest on all but its Civil War debt with new 6% bonds.⁵ The debt had been contracted largely for railroads.⁶ Some of the efforts to give aid North Carolina resulted disastrously, and in other cases the agents of the State wasted the funds.⁷ Governor Caldwell in 1871 declared that for many of the "special tax" bonds, issued in exchange for railroad and canal stock, the State received only from ten to thirty cents in currency on the dollar, and for certain railroad-aid bonds, less than fifty cents in specie.⁸ October 1, 1876, the total debt of the State was given as \$41,846,930.45. Of this, over \$13,000,000 was unpaid interest.⁹

Governor Vance, in a message to the general assembly in 1879, claimed that the State was under no moral obligation to pay the debt at face value. He said: "Quite one half of our property upon which our bonds were based, was wantonly destroyed by consent of a large majority of those who held them. . . ." He declared that practically all the special tax bonds were "not binding either

¹ *Virginia v. West Virginia*, 220 U.S. 1; 31 S.C. 330; 55 L.E. 353.

² See *Virginia v. West Virginia*, 231 U.S. 89; 34 S.C. 29; 58 L.E. 135.

³ *Virginia v. West Virginia*, 234 U.S. 117. For summary of report of Master, see *Commercial and Financial Chronicle*, vol. 100, p. 414.

⁴ See *Commercial and Financial Chronicle*, vol. 100, p. 2099.

⁵ *Ibid.*, vol. 6, p. 748.

⁶ *Tenth Census*, vol. VII, p. 567.

⁷ *Commercial and Financial Chronicle*, vol. 12, p. 263.

⁸ *Ibid.*, vol. 13, pp. 740-41; vol. 17, p. 803.

⁹ *Ibid.*, vol. 23, p. 599.

in law or good morals.”¹ An amendment to the State Constitution² was adopted and ratified later by popular vote forbidding payment of the following bonds unless the proposal to pay them shall have been ratified by a majority of all the voters of the State: special tax bonds, \$11,366,000; Chatham Railroad bonds, \$1,030,000; Williamston and Tarboro Railroad bonds, \$150,000; penitentiary bonds of 1868, \$44,000. These bonds still are unpaid.³

In 1879, the legislature also passed funding laws⁴ providing substantially as follows: (1) for the issue of 4% bonds due in 1910 to fund ante-war bonds at 40% of face value, railroad bonds recognized as valid at 25% of face value, and funding bonds of 1866 and 1868 at 15% of face value, nothing being given for overdue coupons; (2) for the issue of 6% bonds due in 1919 in exchange for North Carolina railroad construction bonds at par, holders of construction bonds abating \$240 of overdue interest on each \$1000 bond. Various attempts have been made since to enforce payment of the special tax bonds.⁵ In 1905, as the result of a decision by the United States Supreme Court,⁶ settlement was made for a small amount of bonds secured by stock of the North Carolina Railroad.⁷ In 1913, the legislature passed an act⁸ authorizing the payment of a small amount of unfunded bonds in cash at fifteen, twenty-five, and forty cents on the dollar of principal on the basis of the Funding Act of 1879. The debt history of North Carolina shows the unfortunate results of a heavy debt incurred to a considerable extent without value received.

During the Civil War, South Carolina became in arrears in interest.⁹ March 23, 1869, an act¹⁰ was passed to provide for the “conversion of state securities.” This South Carolina

¹ *Commercial and Financial Chronicle*, vol. 28, p. 69.

² *Constitution of North Carolina* (1868, as amended 1879), art. 1, sec. 6.

³ *Thirty-ninth Annual Report*, Council of the Corporation of Foreign Bondholders, p. 366.

⁴ *Laws of North Carolina* (1879), chaps. 98 and 138.

⁵ See *Commercial and Financial Chronicle*, vol. 85, p. 1100; vol. 86, p. 121; vol. 90, p. 249; vol. 92, pp. 477 and 610.

⁶ *South Dakota v. North Carolina*, 192 U.S. 286 (1904).

⁷ See *Commercial and Financial Chronicle*, vol. 80, p. 1382.

⁸ *Public Laws of North Carolina* (1913), chap. 131. Cf. *ibid.* (1879), chap. 98.

⁹ *Commercial and Financial Chronicle*, vol. 13, p. 622.

¹⁰ *Acts of South Carolina* (1868-69), no. 159.

act provided for funding the old debt and interest with new securities bearing the same rates of interest as the old. The state debt history of South Carolina goes back to 1794 and includes the issue of bonds in aid of banks and railroads.¹ After the Civil War, the State suffered under an extreme example of "carpet-bag" government.² Much of the State's money was stolen or wasted.³ Apparently bonds were issued largely in excess of the amounts authorized by law, and railroad securities were endorsed on a wholesale scale. According to a report of a committee of the legislature during the session of 1871-72, there had been created direct and contingent liabilities amounting to \$28,977,608.20 for the existence of a large part of which no adequate reason could be given. The State was declared to be virtually bankrupt.⁴ In January, 1872, the State again defaulted in interest.⁵

In 1873,⁶ the legislature passed an "act to reduce the volume of the public debt and to provide for the payment of the same."⁷ This act declared void \$5,965,000 bonds issued for the conversion of the State debt, on the ground that these were put on the market without authority of law. It provided further that the remainder of the debt should be funded at fifty per cent of its face value and interest from 1872 into new 6% "green consols." Up to October 31, 1875, there had been funded, under the Act of 1873, \$7,220,512.65 of the old debt.⁸

At various times, up to 1877, interest on all or a part of the debt was in default.⁹ Legislative investigating committees in 1877 reported \$3,608,707 treasury vouchers issued without proper

¹ *Commercial and Financial Chronicle*, vol. 12, p. 297.

² *Ibid.*, vol. 13, pp. 622-23. *International Review*, November, 1880, pp. 576-77.

³ The liberality of the legislature to itself and its friends extended at one time to having fitted up a room in the State House wherein to serve "wines, liquors, eatables, and cigars to state officials, senators, members of the House and their friends, at all hours of the day and night." (*Report of the Joint Investigating Committee on Public Frauds, etc.*, 1877-78, quoted in Scott, *The Repudiation of State Debts* [New York and Boston, 1893], Appendix VI, p. 314.)

⁴ *Tenth Census*, vol. VII, p. 572.

⁵ *Commercial and Financial Chronicle*, vol. 18, p. 317.

⁶ The governor in a message referred to the debt of the State, October 31, 1873, as \$15,851,627.35. *Tenth Census*, vol. VII, p. 574.

⁷ *Acts of South Carolina* (Special Session, 1873), no. 427.

⁸ *Tenth Census*, vol. VII, p. 575.

⁹ See *Commercial and Financial Chronicle*, vol. 21, pp. 224, 231, 535, 614; vol. 23, p. 57; vol. 24, p. 445.

legal authority and the overissue of \$1,000,000 of a loan for the payment of interest on the public debt. March 22, 1878, there was established by joint resolution a court of claims, with the idea of trying to straighten out the state finances.¹ In 1879, the Supreme Court of the State declared illegal certain bonds included in the refunding under the Act of 1873.² Invalidity was discovered to a considerable extent among the "green consols."³

The final adjustment took place under an act approved December 24, 1879, and amended February 20, 1880.⁴ All valid "green consols" and valid portions were exchangeable at par with interest to July 1, 1878, for new "brown bonds" printed from the same plates.⁵ A writer in the "International Review" in 1880 held that South Carolina had the best excuse for repudiation of all of the States.⁶

An act⁷ was passed in 1871 "to protect the people of the State of Georgia against the illegal and fraudulent issues of bonds. . . ." Under authority of the state constitution of 1868, Georgia endorsements of railroad bonds were permitted for not over one half the cost of the road and provided that the State should have a first lien on the property.⁸ Accordingly, up to March 16, 1871, the State had endorsed \$5,923,000 railroad bonds.⁹ Furthermore, under the rule of the "carpet-baggers," Georgia was plunged into debt for all sorts of alleged public improvements. Later, claims were made of the issue of bonds in excess of the amount provided by law, of fraud, and of other irregularities.¹⁰

¹ *Tenth Census*, vol. VII, pp. 576-77. *Acts of South Carolina* (1877-78), Joint Resolution no. 99, p. 669.

² *Walker v. State of South Carolina*, 12 S.C. 200 (1879).

³ *Commercial and Financial Chronicle*, vol. 28, p. 18.

⁴ *Acts of South Carolina* (1879), no. 186. *Ibid.* (1880, Extra Session), no. 224.

⁵ December 19, 1904, the United States Supreme Court affirmed the decision of the United States Circuit Court in the case of *Lee v. Robinson* and declared the revenue bond scrip of this State to be void. (196 U.S. 64.) Under Act of March 2, 1872, \$1,800,000 of this scrip had been issued. (*Commercial and Financial Chronicle*, vol. 80, p. 725.) The act was passed over the veto of the governor, March 2, 1872 (*Acts of South Carolina* [1871-72], no. 65.)

⁶ *International Review*, November, 1880, p. 576.

⁷ *Georgia Laws* (1871-72), no. 5.

⁸ *Constitution of Georgia* (1868), art. III, sec. VI, sub-sec. 5.

⁹ *Commercial and Financial Chronicle*, vol. 12, p. 360.

¹⁰ *Lalor's Cyclopædia of Political Science* (Chicago, 1884), vol. III, p. 606. See *Preamble of Georgia Laws* (1871-72), no. 5.

The legislature in 1872 declared void \$3,982,000 state bonds and state endorsements of \$4,475,000 railroad bonds.¹ An amendment² to the constitution in 1877 provided that numerous issues of bonds never should be paid. The principal of the defaulted debt of Georgia in 1912, according to the Council of the Corporation of Foreign Bondholders, was \$12,757,000.³ In justice to Georgia, it must be said that, while her resources probably were sufficient to take care of her entire debt,⁴ she suffered in common with other Southern States through incompetent and dishonest government in the Reconstruction period.⁵

Beginning in 1823, Alabama issued its bonds in aid of banks and other private enterprises. In the early forties, interest on the state debt was met promptly, though with difficulty.

Alabama After November, 1861, interest payable in New York was defaulted, but interest due in London was paid regularly to January, 1865. Later, the unpaid interest on bonds issued both in London and in New York was settled with new bonds. A similar settlement was made for the principal of bonds which matured in 1863, 1865, and 1866.⁶

In 1867 and 1868, the legislature passed acts⁷ providing for state endorsement of railroad bonds under certain conditions. Under this general authority, endorsements were made for \$19,006,000. The State also issued \$2,300,000 direct bonds for railroads.⁸ July, 1872, the State defaulted in interest on bonds and endorsements in aid of the Alabama and Chattanooga Railroad.⁹ The road had become bankrupt.¹⁰ In 1873, an act¹¹ was approved

¹ *Commercial and Financial Chronicle*, vol. 15, p. 411. *Georgia Laws* (1872), nos. 1, 2, 3, 4, 5.

² *Georgia Constitution* (1868), art. 3, sec. 6, as amended May 1, 1877.

³ *Thirty-ninth Annual Report*, Council of the Corporation of Foreign Bondholders, p. 366.

⁴ Investors' Supplement, *Commercial and Financial Chronicle*, July 31, 1875, p. iv. *International Review*, November, 1880, p. 578.

⁵ See *Commercial and Financial Chronicle*, vol. 19, p. 375. Lalor's *Cyclopædia of Political Science*, vol. III, p. 606.

⁶ *Tenth Census*, vol. VII, pp. 590-92.

⁷ *Acts of Alabama* (1866-67), no. 641, as amended by *ibid.* (1868), p. 17; *ibid.* (1868), no. 3. See also *ibid.* (1869-70), no. 142.

⁸ *Tenth Census*, vol. VII, p. 593.

⁹ *Commercial and Financial Chronicle*, vol. 15, p. 14.

¹⁰ *Ibid.*, vol. 13, p. 739.

¹¹ *Acts of Alabama* (1872-73), no. 21, approved April 21, 1873.

providing for the issue of state bonds in place of state endorsements in the ratio of one to four. The new bonds were to mature in thirty years and bear 7% interest. The State settled with some of the railroad companies on this basis.¹

In June, 1875, the debt of Alabama was estimated as \$31,952,000.30, of which \$9,691,000 was contingent railroad debt, \$4,696,407 past-due interest, and \$2,500,000 estimated floating debt.² The taxable property of the State at this time was about \$159,000,000.³ The State was described as in a condition of "practical insolvency." This was held to be due to the bad effects of the war, loss of crops, and loose state and county administrations. A Southern newspaper blamed the bondholders for supporting Congress in fastening on the people "that thieving crew" who voted away the State's credit "by the cart-load."⁴

By an act⁵ passed in 1876, the debt was "adjusted" to not over \$9,668,423.⁶ There were authorized \$7,000,000 new bonds bearing interest at 2% for the first five years, 3% for the next five, 4% for the next ten, and 5% for the final ten years; \$1,000,000 bearing interest at 2% for the first five years and 4% for the next twenty-five; and \$596,000 bearing 5% from the beginning. For the old general direct debt bearing 5%, 6%, and 8% interest, the new 2%, 3%, 4%, and 5% bonds were given dollar for dollar without any allowance for interest; for the 7% state bonds issued in the ratio of one to four for endorsed railroad bonds, the new 5% bonds were given at the rate of fifty cents on the dollar of principal, together with a waiver of certain unpaid taxes. In exchange for the endorsed bonds of the Alabama and Chattanooga Railroad, amounting to \$5,300,000, there were given the \$1,000,000 bonds bearing 2% for five years and 4% for twenty-five years; for the \$2,000,000 state bonds issued direct to the railroad, the State released its lien on the road and transferred 500,000 acres of land.⁷ There are at present defaulted loans of the State of

¹ *Tenth Census*, vol. VII, p. 593.

² *Commercial and Financial Chronicle*, vol. 20, p. 582. ³ *Ibid.*, vol. 21, p. 276.

⁴ *Ibid.*, vol. 20, p. 582.

⁵ *Acts of Alabama* (1875-76), no. 38.

⁶ *Tenth Census*, vol. VII, p. 595. See also *Commercial and Financial Chronicle*, vol. 23, p. 622.

⁷ See *Third Annual Report*, Council of the Corporation of Foreign Bondholders, pp. 21-22; *Fourth Report*, pp. 12-17, and *Fifth Report*, pp. 10-11. *Tenth Census*, vol. VII, pp. 594-95.

Alabama, but there are no available records of their amount and character.¹

Tennessee issued bonds in aid of banks as early as 1832. The State also issued bonds, from time to time, in aid of railroad and turnpike companies. In April, 1865, the total state liabilities, including endorsements but not including war debt, were given as nearly \$20,000,000. Small portions of the principal of the state debt had matured from 1861 to 1864 and had not been paid. The revenues of the State in 1865 were insufficient to pay current expenses and interest on the debt. A large portion of the railroad companies to whom bonds were issued did not pay the interest. From time to time these roads were sold and the proceeds applied to payment of the bonds.² In 1865, provision was made for paying all past-due bonds and interest.³

In 1866, \$5,958,000 additional state bonds were authorized in aid of railroads. The July, 1868, interest on the debt was not met. In 1868, interest was funded. July 1, 1869, the total liabilities of the State were \$39,896,504.55. Of this debt a considerable portion was taken care of through sale of state interests in railroads.⁴ March 17, 1873, an act⁵ was approved to fund the legally issued bonds and coupons of the State with new 6% bonds.

The July, 1875, interest was not paid.⁶ The State had difficulty in collecting taxes.⁷ In 1879, the governor of the State said that it had been able to pay only three installments of interest in ten years. He reported the debt, including interest, as \$24,274,017.⁸ An act, approved March 28, 1879, for funding the debt at fifty cents on the dollar with new 4% bonds, was rejected by popular vote.⁹ In 1881, an act was passed funding the debt at par with new 3% bonds, but this act was declared unconstitutional by the Supreme Court of the State.¹⁰ In 1882, an act was passed funding the debt at 60% of the principal and interest with new bonds

¹ *Thirty-ninth Annual Report*, Council of the Corporation of Foreign Bondholders, p. 365.

² *Tenth Census*, vol. VII, pp. 604-05. ³ *Acts of Tennessee* (1865-66), chap. IX.

⁴ *Tenth Census*, vol. VII, pp. 605-06. ⁵ *Acts of Tennessee* (1873), chap. XXIV.

⁶ *Commercial and Financial Chronicle*, vol. 21, p. 87.

⁷ *Ibid.*, vol. 21, p. 614.

⁸ *Ibid.*, vol. 28, p. 44.

⁹ *Seventh Annual Report*, Council of the Corporation of Foreign Bondholders, p. 60.

¹⁰ *Acts of Tennessee* (1881), chap. CLXXIII. *Lynn v. Polk*, 76 Tenn. 121 (1881).

bearing 3% interest for two years, 4% for two years, 5% for two years, and 6% for twenty-four years.¹ In 1883, the state treasurer absconded leaving a large deficit. The legislature thereupon repudiated the settlement and stopped the payment of the January coupons.²

In the same year the legislature passed an act³ scaling certain portions of the debt 24%, 21%, and 20%, and funding these portions with bonds bearing 6%, 5¼%, and 5% respectively, and scaling practically all the rest of the debt 50% and funding it at 3% interest. Under an act of 1905,⁴ all unfunded bonds, except \$335,666.66 held by the United States Government, were eliminated from the state debt as of January, 1907.

In the case of Tennessee, there was no reasonable doubt about the validity of most of its bonds.⁵ Like many others, the State incurred a large debt — sometimes for purposes of doubtful value. The State had a good many misfortunes, including war and yellow fever. The condition of the Southern States at one time, according to the "Commercial and Financial Chronicle,"⁶ called for forbearance. At the same time the treatment of their debts was not such as to inspire the confidence of investors.

Since the Civil War, Louisiana has had a debt history somewhat similar to the debt histories of other Southern States. The early debt of the State included bonds issued for railroads and liabilities incurred in aid of banks and municipalities.⁷ In 1866, the state auditor referred to the great decrease in taxable property since the Civil War, to the difficulty of collecting taxes, and to the fact that state currency was receivable for public dues.⁸ The legislature of 1866 authorized \$997,300 bonds to pay certain bonds and coupons past due.

Louisiana

¹ *Acts of Tennessee* (1881-83, 3d Extra Session, 42d General Assembly), chap. 4, p. 6.

² *Tenth Annual Report*, Council of the Corporation of Foreign Bondholders, p. 92. See *Commercial and Financial Chronicle*, vol. 36, p. 170. *Acts of Tennessee* (1883), chaps. II, IV.

³ *Acts of Tennessee* (1883), chap. LXXXIV, p. 76.

⁴ *Ibid.* (1905), chap. 393.

⁵ *International Review*, November, 1880, p. 585. See *Lalor's Cyclopædia of Political Science*, vol. III, p. 610.

⁶ See *Commercial and Financial Chronicle*, vol. 28, p. 27, and vol. 29, p. 82.

⁷ See *Tenth Census*, vol. VII, p. 597. For certain interesting phases of early history, see *North American Review*, January, 1844, pp. 137-40.

⁸ *Commercial and Financial Chronicle*, vol. 4, p. 233.

From 1867 to 1871, large amounts of bonds were issued for levees and in aid of railroads and canals.¹ In 1871, certain taxpayers issued a warning that the legislature was exceeding its powers.² The total liabilities of the State January 1, 1872, amounted to \$41,733,752.³ A considerable amount of overdue interest was paid in 1873. Later, a committee of seven citizens appointed by the governor reported against the validity of a large part of the debt, and claimed that for a portion of the remainder the State had received only from thirty to fifty cents on the dollar.⁴ In September, 1874, owing to misgovernment and impending bankruptcy, the Federal authorities placed General Emory temporarily in charge of the State Government and property.⁵

January 24, 1874, a funding act⁶ had been passed providing for an issue of "consolidated bonds of the State of Louisiana," payable forty years from January 1, 1874, and to bear 7% interest. These bonds were to be exchanged for all valid bonds at the rate of sixty cents on the dollar. Under the same date, another act⁷ was passed proposing a constitutional amendment to declare the new consolidated bonds a valid contract between the State and the holders of the bonds. May 17, 1875, Governor Kellogg, who had returned to power, signed an act⁸ supplemental to the funding act. The new law declared \$14,320,000 bonds, issued mostly for levees and railroads, "questioned and doubtful." The bonds were to be passed upon by the courts. Under these acts, there were funded up to the close of 1878 old bonds amounting to \$19,874,666.⁹

January 1, 1879, the State again defaulted in interest.¹⁰ The debt ordinance¹¹ of the new constitution of the State, adopted July

¹ *Tenth Census*, vol. VII, p. 598.

² *Commercial and Financial Chronicle*, vol. 12, p. 403.

³ *Tenth Census*, vol. VII, p. 598.

⁴ *Commercial and Financial Chronicle*, vol. 18, p. 62.

⁵ *Ibid.*, vol. 19, p. 283.

⁶ *Laws of Louisiana* (1874, 3d Leg., 2d Sess.), no. 3.

⁷ *Ibid.*, no. 4.

⁸ *Ibid.* (1875, Extra Sess.), no. 11. *Commercial and Financial Chronicle*, vol. 20, p. 521.

⁹ *Sixth Annual Report*, Council of the Corporation of Foreign Bondholders, p. 34. On a portion of the new bonds, the State was in default July 1, 1874, July 1, 1875, and July 1, 1876.

¹⁰ *Commercial and Financial Chronicle*, vol. 28, p. 42. Defaults also in 1877 and 1878. (Scott, p. 115.)

¹¹ *Constitution of Louisiana* (1879), art. 1 of debt ordinance. See *Laws of Louisiana* (1884), pp. 74 and 77.

23, 1879, reduced the interest on the consolidated bonds to 2% for five years from January 1, 1880, 3% for fifteen years, and 4% thereafter. Holders of the consolidated bonds were given the option of exchanging them at the rate of seventy-five cents on the dollar for new bonds bearing interest at the rate of 4%. This action, together with the repudiation of various issues of bonds, was justified by those who carried it out on the grounds that at one time the State House had been seized by United States soldiers, that the body of men that passed the funding act of 1874 was not a constitutional legislature, and that the bondholders were mainly Northern capitalists.¹ In June, 1882, an amendment was passed, and later ratified by the people, fixing interest on the consolidated bonds at 2% for five years from January 1, 1880, and 4% thereafter.² The Supreme Court of the United States in March, 1883, held that whether or not the debt ordinance violated the contract of 1874 and therefore was unconstitutional, there was no remedy.³ The Council of the Corporation of Foreign Bondholders in 1912 listed \$5,627,160 Louisiana bonds the principal of which was in default.⁴

The only other State to be discussed in connection with defaults is Missouri. This State was in default in interest on its railroad debt from 1861 to 1867. In the early fifties, Missouri Missouri had loaned its credit on a liberal scale for the construction of railroads. In 1859, 1860, and 1861, nearly all the railroads which had debts guaranteed by the State defaulted. The State became directly responsible for obligations amounting to \$23,701,000, in addition to its previous debt of about \$1,000,000. Later, much of the railroad property was destroyed. Furthermore, during the Civil War, the State was obliged to incur large additional indebtedness for military purposes. The state debt proper and the new military debt were taken care of promptly as regards interest; and by the end of the war, the principal of the military debt had been considerably reduced. On January 1, 1865, the

¹ Lalor's *Cyclopædia of Political Science*, vol. III, p. 606.

² Amendment ratified April 22, 1884. See *Laws of Louisiana* (1882), no. 76, and *ibid.* (1884), p. 77.

³ *Louisiana v. Jumel*, 107 U.S. 711. *New Hampshire v. Louisiana*, 108 U.S. 76.

⁴ *Thirty-ninth Annual Report*, Council of the Corporation of Foreign Bondholders, p. 366.

aggregate state debt was \$36,094,908, of which \$24,754,000 represented railroad bonds which the State had guaranteed and old state bonds issued prior to the Civil War.¹

In 1867, the legislature passed an act² authorizing a tax of four mills to be applied to the credit of the state interest fund, and providing that certain sums received from the United States be applied to the payment of overdue coupons. The act also provided for the issue of six per cent funding bonds for the remaining overdue coupons. In 1874, a further funding act³ provided for \$1,000,000 six per cent twenty-year funding bonds to be used from time to time to pay maturing bonds. So vigorously did Missouri go about the work of paying its debt that by January 1, 1869, the total debt had been reduced to \$21,675,000 and by January 1, 1885, to \$15,243,000. The debt history of Missouri is a troubled but an honorable one.

In the matter of debt histories, mention may be made of three other States. In 1840 to 1842, the solvency of New York State was "in great jeopardy." The State had made loans to railroads and incurred a large debt for canals. In 1841, Ohio had great difficulty in borrowing money to continue work on its system of internal improvements. Both these States, however, always managed to pay promptly interest and principal of their debts. Massachusetts, during the Civil War, when gold was at a premium, agreed to pay interest and principal of all scrip and bonds in gold or silver coin.⁴ All the other States of the Union, according to our information, have clear records for the payment of their debts. The States with longer histories have had more chances to get into trouble than the younger States, and also have not always had others' mistakes to guide them. Repudiation has not been confined to the Southern States; though it must be said that the people of those States have shown, on the whole, much less responsibility in debt matters than the people of the North and West. This may be accounted

Summary of
state debt
records

¹ See *Report*, State Auditor of Missouri (1883-84), part II, pp. 40, 74 and 116, and *Tenth Census*, vol. VII, pp. 636-37.

² Act approved March 12, 1867 (*Laws of Missouri* [1867], p. 168), as amended by act approved March 25, 1868 (*ibid.* [1868, Adj. Sess.] p. 174).

³ Act approved March 30, 1874 (*Laws of Missouri* [1874], p. 169).

⁴ *Tenth Census*, vol. VII, pp. 537, 539, 614.

for partly by the large percentage of negro population in the South.

Our study of the debt history of the States leads us to the conclusion that debts too large compared with the property available for taxation or debts incurred for purposes not strictly public¹ are dangerous. The people of a State are likely to refuse to pay when they feel unwilling to stand the burden of taxation necessary or when they feel that they have not had their money's worth for their bonds. The situation is greatly aggravated by the fact that there is no adequate legal remedy for bondholders. As long as the Eleventh Amendment stands, "a sovereign State possesses the royal right of snapping its fingers in its creditor's face."² However, people, even the most light-hearted in debt matters, are willing to pay their debts and maintain their credit when the debts have been justly incurred and when they have plenty of resources with which to pay.

Debts too large
or for doubtful
purposes are
dangerous

The experiences of our States in the creation and payment of debts have had the salutary effect of causing practically all the States of the Union to place in their constitutions debt provisions which are, on the whole, extremely conservative. Just as our form of government, federal, state, and municipal, is largely the outgrowth of our colonial experience in government, so the limitations in our state constitutions on the creation of debt by the States are the outgrowth of our early experience in debt-making.

Experience has
caused practi-
cally all the
States to limit
in their con-
stitutions state
debt-making

Four States, however (New Hampshire, Vermont, Massachusetts, and Connecticut), have no constitutional limitations whatever on the creation of debt. These States have such splendid financial records that the necessity of imposing constitutional restrictions on the debt-making power of the legislatures never has been strongly felt.

Four States
have no
constitutional
limitations

The present constitutional provisions in regard to the debt-

¹ There is developing at the present time in Canada an interesting situation and one which bears a striking resemblance to the situation in the United States before 1840. The Dominion Government has guaranteed bonds of the Canadian Northern and Grand Trunk Pacific Railways. The situation of the companies is such that the Government may be called on to make good its guarantee and the economic and financial condition of Canada makes this problem full of interest. (See *Boston Evening Transcript*, January 11, 1915.)

² Lalor's *Cyclopaedia of Political Science*, vol. III, p. 613.

creating power of the remaining States of the Union are grouped about five principal considerations:—

Leading constitutional provisions governing creation of state debts

- (1) Permission to borrow without limit for the purpose of repelling invasion, suppressing insurrection, or defending the State in time of war.
- (2) Permission to borrow, usually limited to a small amount, for the purpose of meeting casual deficiencies in revenue.
- (3) Permission to borrow for some special purpose definitely stated in the act authorizing the loan, provided that arrangements are made in the act for paying the interest and principal of the bonds and provided in many cases that the act authorizing the loan is ratified by a vote of the people.
- (4) Permission to issue bonds or notes to refund existing debt.
- (5) Prohibition against loaning the credit of the State to private enterprises, engaging in works of internal improvement, or loaning credit to political subdivisions.

The above provisions may be said to be the standard constitutional arrangements about the creation of debts by States.¹

The provision permitting unlimited borrowing in case of invasion, insurrection, or war obviously is necessary and advantageous. If a State cannot protect itself against invasion, or cannot maintain law and order, or even is unable to assist the National Government in time of need, its very existence is threatened.

Invasion, insurrection, or war

The provision allowing a State to issue bonds or notes up to a small amount to take care of casual deficiencies in revenue or other unexpected emergencies is simply precautionary. The amount which a State may borrow on this basis should be and usually is limited very strictly. These loans are in their very nature temporary and are paid usually out of revenues as received.²

Casual deficiencies and other emergencies

¹ For examples of fairly representative constitutional debt provisions, see *Constitution of New York* (1894), as amended, art. VII, secs. 1-4, as amended in November, 1909, and art. VII, sec. 12; *Constitution of Ohio* (1851), as amended September, 1912, art. VIII, secs. 1-5, and art. XII, sec. 6; *Constitution of Virginia* (1902), art. XIII, secs. 184, 185, and 187; *Constitution of Utah* (1895), as amended, art. XIV, secs. 1, 2, and 6; *Constitution of California* (1879), as amended, art. IV, secs. 22, 31; art. XII, sec. 13; art. XVI, sec. 1.

² The constitution of Missouri (1875) provides that such loans shall be paid within two years. (Art. IV, sec. 44.)

The provision allowing a State to borrow for some definite piece of work, provided arrangements are made in the act for the payment of the loan and provided the people approve the creation of the debt, is not found in all the state constitutions. It is, however, a fairly common provision. It is under this authority granted by its constitution that the State of New York has borrowed large sums on long-term bonds for highways and canals. It is a provision which in the case of any people not naturally careful about the creation of debt may be liable to a good deal of abuse.

Borrowing for definite purpose when authorized by vote of the people

Prohibition against using the credit of the State in aid of private enterprises, which is found in almost all the constitutions,¹ is the direct result of the early experience of the States in debt-making.

Prohibition against loaning credit

In the constitutions of some of the States there are found special provisions about the proportion of debt to assessed valuation, about the form of votes for authorizing debt, about the length of time which bonds shall have to run, and various other matters. Sometimes special provision is made for specific issues of bonds, as in the case of California² for the Panama Pacific Exposition.

Special constitutional provisions

The constitution of North Dakota³ provides for the certification by the auditor and secretary of state on all state bonds that the same are issued pursuant to law and within the debt limit. In view of the fact that a State may refuse to pay its debt, whether legally issued or not, the question of legality is not as important in state bonds as in municipal bonds. It should, however, always be taken into consideration. This is attended to usually by obtaining the opinion of competent lawyers.

Legality of issue

A careful study of the constitutional provisions of all the States in regard to the creation and payment of debts shows a substantial agreement on what is sound and wise. The provisions have almost a monotonous uniformity.

Substantial agreement as to creation and payment of state debts

¹ *Contra*, see *Constitution of Rhode Island* (1842), art. IV, sec. 13.

² *Constitution of California* (1879), art. IV, sec. 22, as amended November 8, 1910.

³ *Constitution of North Dakota* (1889), art. XII, sec. 187.

On the whole, the States of our Union, since the early days of the rage for so-called internal improvements and since the Civil War and carpet-bag periods in the South, have been exceedingly careful about creating and very conscientious about paying debts. The frequent amendments to the constitutions of some of our Western and Southern States, however, show that in the last resort the only reliable safeguard against the creation of excessive debts is the disposition of the people themselves.

Another important class of considerations in estimating the credit of our States is concerned with population. The amount of population and the increase of population in a State, as showing its size and growth, are important. Table A (on page 133) gives the population in 1900 and in 1910 and the percentage of increase from 1900 to 1910 of all our States.¹

Table A shows the greatest percentage of increase in population in the States of North Dakota, Oklahoma, Idaho, Nevada, and Washington and the smallest percentage of increase in New Hampshire, Vermont, Iowa, and Missouri. The credit of the respective States mentioned, however, shows how dangerous is the taking of any one factor by itself as decisive in determining the credit of a State.

The character of the population is a far better test of credit. Table B (on page 134) shows the percentage of white, negro, and all other races to total population in all our States in 1900 and 1910.²

Table B shows the States of Maine, New Hampshire, Vermont, Michigan, Wisconsin, Minnesota, Iowa, and Nebraska all with a population 99% or over white. On the other hand, it shows the States of South Carolina and Mississippi with a white population of less than 45% of the whole; the States of Georgia, Florida, Alabama, and Louisiana with a white population of only between 50% and 60%; and the States of Virginia and North Carolina with a white population between 60% and 70%. These figures are interesting when taken in connection with the debt histories of the various States.

¹ *Thirteenth Census, Population*, vol. 1, pp. 30, 32. ² *Ibid.*, vol. 1, pp. 147-53.

TABLE A

State	Population		Per cent of increase 1900-10
	1900	1910	
Alabama.....	1,828,697	2,138,093	16.9
Arizona.....	122,931	204,354	66.2
Arkansas.....	1,311,564	1,574,449	20.0
California.....	1,485,053	2,377,549	60.1
Colorado.....	539,700	799,024	48.0
Connecticut.....	908,420	1,114,756	22.7
Delaware.....	184,735	202,322	9.5
Florida.....	528,542	752,619	42.4
Georgia.....	2,216,331	2,609,121	17.7
Idaho.....	161,772	325,594	101.3
Illinois.....	4,821,550	5,638,591	16.9
Indiana.....	2,516,462	2,700,876	7.3
Iowa.....	2,231,853	2,224,771	0.3
Kansas.....	1,470,495	1,690,949	15.0
Kentucky.....	2,147,174	2,289,905	6.6
Louisiana.....	1,381,625	1,656,388	19.9
Maine.....	604,466	742,371	6.9
Maryland.....	1,188,044	1,295,346	9.0
Massachusetts.....	2,805,346	3,366,416	20.0
Michigan.....	2,420,982	2,810,173	16.1
Minnesota.....	1,751,394	2,075,708	18.5
Mississippi.....	1,551,270	1,797,114	15.8
Missouri.....	3,106,665	3,293,335	6.0
Montana.....	243,329	376,053	54.5
Nebraska.....	1,066,300	1,192,214	11.8
Nevada.....	42,335	81,875	93.4
New Hampshire.....	411,588	430,572	4.6
New Jersey.....	1,883,660	2,537,167	34.7
New Mexico.....	195,310	327,301	67.6
New York.....	7,268,894	9,113,614	25.4
North Carolina.....	1,893,810	2,206,287	16.5
North Dakota.....	319,146	577,056	80.8
Ohio.....	4,157,545	4,767,121	14.7
Oklahoma.....	790,391	1,657,155	109.7
Oregon.....	413,536	672,765	62.7
Pennsylvania.....	6,302,115	7,665,111	21.6
Rhode Island.....	428,556	542,610	26.6
South Carolina.....	1,340,316	1,515,400	13.1
South Dakota.....	401,570	583,888	45.4
Tennessee.....	2,020,616	2,184,789	8.1
Texas.....	3,048,710	3,896,542	27.8
Utah.....	276,749	373,351	34.9
Vermont.....	343,641	355,956	3.6
Virginia.....	1,854,184	2,061,612	11.2
Washington.....	518,103	1,141,990	120.4
West Virginia.....	958,800	1,221,119	27.4
Wisconsin.....	2,069,042	2,333,860	12.8
Wyoming.....	92,531	145,965	57.7

TABLE B

State	White		Negro		Indian, Chinese, Japanese and others	
	1900	1910	1900	1910	1900	1910
Alabama.....	54.7	57.5	45.2	42.5	(1)	(1)
Arizona.....	75.6	83.9	1.5	1.0	22.0	15.1
Arkansas.....	72.0	71.8	28.0	28.1	(1)	(1)
California.....	94.5	95.0	0.7	0.9	4.8	4.0
Colorado.....	98.0	98.0	1.6	1.4	0.4	0.5
Connecticut.....	98.2	98.6	1.7	1.4	0.1	0.1
Delaware.....	83.4	84.6	16.6	15.4	(1)	(1)
Florida.....	56.3	58.9	43.7	41.0	0.1	(1)
Georgia.....	53.3	54.9	46.7	45.1	(1)	(1)
Idaho.....	95.5	98.0	0.2	0.2	4.3	1.8
Illinois.....	98.2	98.0	1.8	1.9	(1)	(1)
Indiana.....	97.7	97.7	2.3	2.2	(1)	(1)
Iowa.....	99.4	99.3	0.6	0.7	(1)	(1)
Kansas.....	96.3	96.7	3.5	3.2	0.1	0.2
Kentucky.....	86.7	88.6	13.3	11.4	(1)	(1)
Louisiana.....	52.8	56.8	47.1	43.1	0.1	0.1
Maine.....	99.7	99.7	0.2	0.2	0.1	0.1
Maryland.....	80.2	82.0	19.8	17.9	(1)	(1)
Massachusetts.....	98.7	98.8	1.1	1.1	0.1	0.1
Michigan.....	99.1	99.1	0.7	0.6	0.3	0.3
Minnesota.....	99.2	99.2	0.3	0.3	0.5	0.5
Mississippi.....	41.3	43.7	58.5	56.2	0.2	0.1
Missouri.....	94.8	95.2	5.2	4.8	(1)	(1)
Montana.....	93.0	95.9	0.6	0.5	6.4	3.6
Nebraska.....	99.1	99.0	0.6	0.6	0.3	0.4
Nevada.....	83.6	90.7	0.3	0.6	16.1	8.7
New Hampshire.....	99.8	99.8	0.2	0.1	(1)	(1)
New Jersey.....	96.2	96.4	3.7	3.5	0.1	0.1
New Mexico.....	92.3	93.1	0.8	0.5	6.9	6.4
New York.....	98.5	98.4	1.4	1.5	0.2	0.1
North Carolina.....	66.7	68.0	33.0	31.6	0.3	0.4
North Dakota.....	97.7	98.8	0.1	0.1	2.2	1.1
Ohio.....	97.7	97.6	2.3	2.3	(1)	(1)
Oklahoma*.....	84.8	87.2	7.0	8.3	8.2	4.5
Oregon.....	95.4	97.4	0.3	0.2	4.3	2.4
Pennsylvania.....	97.5	97.4	2.5	2.5	0.1	(1)
Rhode Island.....	97.8	98.1	2.1	1.8	0.1	0.1
South Carolina.....	41.6	44.8	58.4	55.2	(1)	(1)
South Dakota.....	94.8	96.6	0.1	0.1	5.1	3.3
Tennessee.....	76.2	78.3	23.8	21.7	(1)	(1)
Texas.....	79.6	82.2	20.4	17.7	(1)	(1)
Utah.....	98.5	98.2	0.2	0.3	1.3	1.5
Vermont.....	99.7	99.5	0.2	0.5	(1)	(1)
Virginia.....	64.3	67.4	35.6	32.6	(1)	(1)
Washington.....	95.8	97.1	0.5	0.5	3.7	2.3
West Virginia.....	95.5	94.7	4.5	5.3	(1)	(1)
Wisconsin.....	99.5	99.4	0.1	0.1	0.4	0.4
Wyoming.....	96.2	96.1	1.0	1.5	2.7	2.3

(1) Less than one-tenth of 1%.

* Includes Indian Territory for 1900.

TABLE C

State	Percentage of illiterates 10 years and over		Class	Percentage of persons from 6 to 20 years attending school
	1900	1910		1910
Alabama.....	34.0	22.9	Negro	51.4
Arizona.....	20.0	20.9	Indian	53.4
Arkansas.....	20.4	12.6	Negro	58.7
California.....	4.8	3.7	Foreign-born white	65.0
Colorado.....	4.2	3.7	Foreign-born white	68.4
Connecticut.....	5.9	6.0	Foreign-born white	64.5
Delaware.....	12.0	8.1	Negro	60.9
Florida.....	21.9	13.8	Negro	52.7
Georgia.....	30.5	20.7	Negro	51.9
Idaho.....	4.6	2.2	Foreign-born white	69.0
Illinois.....	4.2	3.7	Foreign-born white	63.4
Indiana.....	4.6	3.1	Native white	66.0
Iowa.....	2.3	1.7	Foreign-born white	69.6
Kansas.....	2.9	2.2	Foreign-born white	70.6
Kentucky.....	16.5	12.1	Native white	61.0
Louisiana.....	38.5	29.0	Negro	43.1
Maine.....	5.1	4.1	Foreign-born white	67.7
Maryland.....	11.1	7.2	Negro	58.4
Massachusetts.....	5.9	5.2	Foreign-born white	66.7
Michigan.....	4.2	3.3	Foreign-born white	67.7
Minnesota.....	4.1	3.0	Foreign-born white	68.4
Mississippi.....	32.0	22.4	Negro	60.2
Missouri.....	6.4	4.3	Native white	65.1
Montana.....	6.1	4.8	Foreign-born white	64.7
Nebraska.....	2.3	1.9	Foreign-born white	69.9
Nevada.....	13.3	6.7	Indian	62.9
New Hampshire.....	6.2	4.6	Foreign-born white	65.8
New Jersey.....	5.9	5.6	Foreign-born white	62.2
New Mexico.....	33.2	20.2	Native white	61.0
New York.....	5.5	5.5	Foreign-born white	63.7
North Carolina.....	28.7	18.5	Negro	61.3
North Dakota.....	5.6	3.1	Foreign-born white	64.1
Ohio.....	4.0	3.2	Foreign-born white	66.1
Oklahoma ¹	12.1	5.6	Native white	67.8
Oregon.....	3.3	1.9	Foreign-born white	66.8
Pennsylvania.....	6.1	5.9	Foreign-born white	62.3
Rhode Island.....	8.4	7.7	Foreign-born white	61.0
South Carolina.....	35.9	25.7	Negro	51.6
South Dakota.....	5.0	2.9	Indian	66.7
Tennessee.....	20.7	13.6	Native white	59.4
Texas.....	14.5	9.9	Negro	58.0
Utah.....	3.1	2.5	Foreign-born white	70.2
Vermont.....	5.8	3.7	Foreign-born white	70.6
Virginia.....	22.9	15.2	Negro	56.3
Washington.....	3.1	2.0	Foreign-born white	66.5
West Virginia.....	11.4	8.3	Native white	65.5
Wisconsin.....	4.7	3.2	Foreign-born white	66.2
Wyoming.....	4.0	3.3	Foreign-born white	64.3

¹ Includes population of Indian Territory for 1900.

Another question to be considered is the intelligence or ignorance of the population. Table C (on page 135) shows the percentage of illiterates of ten years of age or over for 1900 and 1910, the class of population from which a majority of the illiterates is drawn, and the percentage of persons between the ages of six and twenty attending school in 1910.¹

Table C shows the States of Iowa, Nebraska, and Oregon with less than 2% of illiterates and the States of South Dakota, Kansas, Utah, Idaho, and Washington with only between 2% and 3% illiterates, whereas it shows the States of South Carolina and Louisiana with over 25% illiterates and the States of Georgia, Alabama, Mississippi, New Mexico, and Arizona with over 20% illiterates. Table C shows further that the largest class of illiterates in the States where illiteracy is greatest, with the exception of New Mexico and Arizona, is negro. The table further shows a school attendance of over 70% in the States of Vermont, Kansas, and Utah and of less than 60% in the States of Maryland, Virginia, South Carolina, Georgia, Florida, Alabama, Tennessee, Louisiana, Arkansas, Texas, and Arizona. All these figures throw light on the debt histories of many of our States. It is a fact to be noted that in every State but Connecticut and New York, where the illiteracy is very small anyway, the percentage of illiterates in 1910 is less than in 1900.

There remains in discussing state bonds only one other broad class of considerations. These are what we will call general considerations — such as the size of the State in territory, the amount of developed and undeveloped resources, the location of the State as regards water and rail facilities, and other similar considerations. Any intelligent person can arrive at a fairly sound conclusion along these lines by observing the geographic positions of the various States, by looking up the reports of their manufactures, by examining the statistics of bank clearings and postal receipts, and by obtaining other general information of a similar character.

As illustrations of what we mean by general considerations favorably affecting the credit of States, we may say that the State of New York, for instance, with

Statistics as
to literacy

General con-
siderations gov-
erning safety
of state bonds

Examples of
same

¹ *Thirteenth Census, Population*, vol. 1, pp. 1108, 1214-18, 1230.

its large and fertile territory settled with an unusual number of important cities, its great harbor on the Atlantic Ocean at New York City, its access to the Great Lakes and its splendid railroad connections with the West, is unusually fortunate; that likewise the State of Illinois, bordering on Lake Michigan and located almost in the center of the great Mississippi watershed, with its immense annual production of wealth from the soil, is fortunate; that so is Texas, with an area large enough and resources large and varied enough to enable it, perhaps, to support the entire population of the United States within its borders; that likewise California is fortunate, with its great area, fine harbors, and advantageous position with regard to the Panama Canal.

In summing up the factors bearing on the credit of States, we wish again to lay emphasis on the following: (1) The proportion of net debt to the assessed valuation and to the true value of property and also the proportion of the debt to the population; (2) the debt history of the State or its record of good or bad faith; (3) the present constitutional provisions regulating the creation and payment of debt; (4) the amount and character of the population; and (5) general considerations bearing on the present prosperity and future growth of the State.

Summary of
factors bearing
on state credit

On the whole, it is probably fair to say that to-day the legally issued obligations of our best States rank next in safety to the obligations of our National Government. The States, broadly speaking, have reserved, and, as far as possible, should reserve, for emergencies the high credit which they have built up through years of successful administration of state finances and through lessons of still earlier years learned at great cost.

Obligations of
our best States
rank next in
safety to ob-
ligations of
the National
Government

One thing more remains to be said. The prices of our state bonds over a long course of years have reflected not only the individual credit of the various States, but also, like all other bonds, the price of capital at any given time. In 1872, we find bonds of such States as Rhode Island, Ohio, and Michigan quoted to yield around 6% net income.¹ In 1882, we find bonds of Rhode Island, New York State, Ohio, Michigan, and Missouri selling to yield roughly between 4% and

Prices of
state bonds
1872-1912

¹ *Commercial and Financial Chronicle*, vol. 14, p. 17.

138 AMERICAN AND FOREIGN INVESTMENT BONDS

4.50%.¹ During this period the bonds of the Southern States sold at all kinds of prices — from $\frac{3}{4}$ of 1% for South Carolina 6 per cents in 1878, 1% for North Carolina special tax bonds in 1879, and 1% for Arkansas railroad-aid 7 per cents in 1884, to 117% for Missouri 6 per cents in 1881 and 180% for North Carolina railroad bonds in 1889² — the price of any given issue being based upon whether interest was being paid on the bonds, whether the principal was questioned, whether there was a large amount of accrued interest provided for in some settlement and other similar considerations. In 1892, we find bonds of New Hampshire offered to yield about 3.25% and of Missouri quoted to yield 3.50%.³ In 1902, we find offerings of State of Massachusetts bonds to yield from 2.95% to 3.05%, of Rhode Island bonds to yield about 2.70%, of New York State bonds to yield from 2.55% to 2.63%, of Indiana bonds to yield about 3.10%, of Tennessee bonds to yield from 3.20% to 3.25%, and of Mississippi bonds to yield about 3.50%.⁴ Lastly, in 1912, we find offerings of State of Massachusetts taxable bonds to yield from 3.80% to 3.85%, State of Connecticut bonds to yield about 3.82%, and State of New York bonds to yield from 3.90% to 3.95%.⁵ These quotations show some of the fluctuations in the price of capital, as well as the credit at different times of some of our States.

The great European war has affected the prices of state bonds very slightly. We give below prices of four issues of state bonds in July, 1914, and in July, 1915: —

	July, 1914*	July, 1915†
Massachusetts taxable registered $3\frac{1}{2}$ per cents‡.....	93.82	92.51
New York State 4 per cents, 1961.....	101 $\frac{1}{2}$ bid	100 $\frac{1}{2}$ –101 $\frac{1}{2}$
Virginia funded debt 2–3 per cents, 1991.....	83 $\frac{1}{2}$ bid	84 $\frac{1}{2}$ sale
California 4 per cents §.....	97.31	97.31

* *Commercial and Financial Chronicle*, July 4, 1914, p. 32.

† *Ibid.*, July 3, 1915, p. 34.

‡ Dealers' lists, July, 1914, and July, 1915. Prices of a twenty-year $3\frac{1}{2}$ % bond reduced from basis prices (3.95% and 4.05%).

§ Dealers' lists, July, 1914, and July, 1915. Prices of twenty-year 4% bonds (4.20% basis).

¹ *Commercial and Financial Chronicle*, vol. 34, p. 24.

² See the *Financial Review* (Annual, 1915), pp. 96–97.

³ Dealers' lists, January, 1892.

⁴ Dealers' lists, January, 1902.

⁵ Dealers' lists, January, 1912.

These show changes during the year so small as to be unimportant.

State bonds, as remarked earlier in this chapter, as a rule are nothing more than promises to pay. These promises are not in the last resort enforceable by suit. The willingness, therefore, as well as the ability, of the people of the State to honor their obligations is of the first importance.

Willingness
of the people
to pay state
bonds is per-
haps the most
important
factor in safety

CHAPTER IV

COUNTY, MUNICIPAL, AND DISTRICT BONDS

COUNTY bonds are the direct obligations of counties. Municipal bonds, strictly speaking, are bonds of cities and towns only. Included in this term very often, however, are bonds issued by school, park, drainage, and fire districts and other quasi-municipal corporations. In all the above cases, the bonds are payable out of taxes levied on all the property within the county, municipality, or district issuing the bonds.¹

County, municipal and district bonds are payable out of taxes

Furthermore, a county, municipality, or district, unlike a State, can be sued without its own consent. In case of failure to pay interest or principal, bondholders can bring suit asking for a levy of taxes. In certain States, such as Maine,² New Hampshire,³ Massachusetts,⁴ and Connecticut,⁵ bondholders have the legal right to seize the property of all the inhabitants in execution of the judgment of a court ordering payment of defaulted municipal bonds.

The means of recovery on defaulted county, municipal, and district bonds are fairly complete

Other factors governing safety are similar to those in case of state bonds

Aside from this question of legal remedy, the leading considerations determining the safety of county, municipal, and district bonds are similar to the considerations governing the safety of state bonds. In other words, these factors are of first importance: —

- (1) The debt statement, or the net debt compared with the assessed valuation and with the true value of property.

¹ There is a class of bonds known as special assessment bonds which are payable out of taxes levied on abutting property. These are not in any legal or true sense municipal bonds.

² *Revised Statutes*, chap. 47, sec. 96, and chap. 86, sec. 30. *Eames v. Savage*, 77 Maine, 212 (1885).

³ *Public Statutes of New Hampshire*, chap. 234, sec. 8.

⁴ *Hawkes v. Kennebec County*, 7 Mass. 461, 463 (1811). *Chase v. Merrimack Bank*, 19 Pick. (Mass.) 564, 569 (1837). *Gaskill v. Dudley*, 6 Met. (Mass.) 546 (1843). *Hill v. Boston*, 122 Mass. 344, 349 (1877).

⁵ *Beardley v. Smith*, 16 Conn. 368 (1844).

- (2) The constitutional and statutory provisions in regard to the creation and payment of debt.
- (3) The record of good or bad faith.
- (4) The amount and character of the population.
- (5) The location, prosperity, and chances for growth of the community.

As a matter of law and of practice, the proportion of net debt — which is usually taken to mean the gross debt less the general sinking funds, the water debt, and sometimes debt created for income-producing property other than waterworks — to the assessed valuation varies considerably in the different States. If it is safe to speak of any definite figure as the normal proportion of net debt to assessed valuation, we may take possibly 5%. The methods of figuring net debt for municipalities in the different States vary so much, however, that this figure can be considered nothing more than an arbitrary standard. It is safe to say that a net debt (meaning here a debt the real burden of which is on the taxpayers) of 1% of the assessed valuation is small and a net debt of 10% dangerously large.¹

The proportion of net debt to assessed valuation varies considerably in the different States

We give below the total debt — including debt for waterworks and other productive purposes, but less sinking-fund assets — of the ten largest cities in the United States.²

Debt less sinking-fund assets of the ten largest cities in the United States

City	Debt, less sinking-fund assets, 1913	Debt, less sinking-fund assets per capita
New York City, New York.....	\$862,743,861	\$165.95
Philadelphia, Pennsylvania.....	100,060,972	61.87
Chicago, Illinois.....	81,699,819	34.85
Boston, Massachusetts.....	75,676,830	104.75
Baltimore, Maryland.....	46,326,458	80.63
Cleveland, Ohio.....	41,829,001	67.17
Pittsburg, Pennsylvania.....	36,539,920	65.51
Buffalo, New York.....	28,365,058	63.47
St. Louis, Missouri.....	22,854,668	31.60
Detroit, Michigan.....	10,513,076	20.19

¹ For assessed valuation of counties and of incorporated places having a population of 2500 and over, and for net debts of counties and of incorporated places, see *Wealth, Debt, and Taxation, 1913*, vol. 1, pp. 348, 398, 752, 841.

² *Ibid.*, pp. 405, 414, 415, 417, 420, 425, 429, 433.

This table shows New York City with by far the largest *per capita* debt and Detroit with by far the smallest.

Modifying in most States, to a great extent, the significance of the net debt of any one municipal corporation is the practice of

The significance of the net debt of a municipality often is modified by the existence of quasi-municipal debt-creating corporations

issuing bonds by several different corporations covering substantially the same territory and levying taxes for the payment of their bonds on practically the same property. We find bond issues by school districts in over thirty States including New Hampshire, New York, Illinois, Utah, South Carolina, and Texas; by water districts in Maine and Massachusetts; by fire districts in New Hampshire, Massachusetts, Rhode Island, and Connecticut; by road districts in Ohio, Mississippi, Louisiana, Arkansas, and Texas; by park districts in Illinois and Missouri; by drainage districts in Illinois, Wisconsin, Iowa, Nebraska, Oklahoma, North Carolina, and Texas; by irrigation districts in Montana, Colorado, and California; and by levee districts in Mississippi, Louisiana, and Arkansas.¹ The State of Missouri contains, besides the counties and cities, at least four different kinds of debt-creating quasi-municipal corporations — namely, school, park, road, and drainage districts; and the States of Mississippi, Louisiana, Arkansas, and Texas contain four kinds — namely, school, road, drainage, and levee or “navigation” districts. In addition to the above, we find in Connecticut especially and to some extent in New York state bond issues by two and sometimes three different municipal or quasi-municipal corporations covering practically the same territory and called cities, towns, boroughs, and villages.²

A 5% municipal debt in a State like Massachusetts may be less of a burden on the community than a 3% municipal debt in a State like Illinois

In view of these facts, it is obvious that a net debt of 5% for a municipality in a State like Massachusetts, where the issue of bonds by districts is comparatively rare, is less of a burden on the community than a net debt say of 3% for a city in some State like Illinois, where there may be also a 2% or a 3% debt for a drainage district covering practically the

¹ These are simply examples and do not include all the States having such districts.

² State and City Section of the *Commercial and Financial Chronicle*, May 29, 1915, *passim*. In the State of Washington there is a corporation, distinct from the city of Seattle, called the Port of Seattle, which has issued bonds. (See *ibid.*, p. 168.)

same territory as the city and possibly a 2% or a 3% debt issue by park districts within the city limits.¹

Consideration of the proportion of debt to property in our municipalities leads to the question of the constitutional and statutory provisions of the various States in regard to the issue of bonds by counties, municipalities, and districts. Perhaps the best way to treat this phase of the subject is to summarize and compare with the laws of other States the recently enacted legislation of Massachusetts governing municipal finances.²

Constitutional and statutory provisions in regard to local debt

The leading provisions of the Massachusetts laws governing the creation of local debt are as follows:—

The Massachusetts laws

1. Except when authorized by law for certain purposes, to be enumerated later, and except for the purpose of paying certain demand notes or restoring trust funds, no city of Massachusetts shall authorize indebtedness to an amount exceeding 2½% and no town to an amount exceeding 3% of the average assessed valuation of taxable property for the three preceding calendar years.³
2. Cities and towns may incur debt within the limit of indebtedness prescribed above for the following purposes and payable within the periods stated below:

Debt limit for cities and towns

Purposes of issue and time to run of obligations within debt limit

¹ In this connection there is an interesting provision in the constitution of South Carolina as follows: that "wherever there shall be several political divisions or municipal corporations covering or extending over the same territory or portions thereof, possessing a power to levy a tax or contract a debt, then each of such political divisions or municipal corporations shall so exercise its power to increase its debt under the foregoing eight per cent limitation that the aggregate debt over and upon any territory of this State shall never exceed fifteen per centum of the value of all taxable property in such territory as valued for taxation by the State: Provided that nothing herein shall prevent the issue of bonds for the purpose of paying or refunding any valid municipal debt heretofore contracted in excess of eight per centum of the assessed value of all the taxable property therein." (*Constitution of South Carolina*, art. x, sec. 5.)

² *Acts 1913*, chap. 719, as amended by *Acts 1914*, chaps. 143 and 317; *Acts 1913*, chap. 648; *Acts 1913*, chap. 634; *Acts 1913*, chap. 677; *Acts 1913*, chap. 727, as amended by *Acts 1914*, chap. 55; *Acts 1910*, chap. 616, as amended by *Acts 1912*, chaps. 45 and 49; *Acts 1913*, chap. 416; *Acts 1909*, chap. 490, part 1, sec. 5, cl. 15, as amended by *Acts 1914*, chap. 83; *Acts 1910*, chap. 379.

³ *Acts 1913*, chap. 719, sec. 12; *Acts 1913*, chap. 634.

Counties in Massachusetts, except Suffolk and Nantucket, cannot borrow, except in anticipation of taxes, without special permission of the Legislature. (*Revised Laws*, chap. 21, sec. 39, as amended by *Acts 1914*, chap. 386.) Fire, water and watch districts are similarly limited. (*Acts 1913*, chap. 719, sec. 3.)

144 AMERICAN AND FOREIGN INVESTMENT BONDS

- (1) For the construction of sewers for sanitary and surface drainage purposes and for sewage disposal, thirty years.
Sewers
- (2) For acquiring land for public parks under the provisions of chapter 28 of the Revised Laws and amendments thereof, thirty years.
Parks
- (3) For acquiring land for, and the construction of, schoolhouses or buildings to be used for any municipal or departmental purpose, including the cost of original equipment and furnishing, twenty years.
School-houses
- (4) For the construction of additions to schoolhouses or buildings to be used for any municipal purpose, including the cost of original equipment and furnishings, where such additions increase the floor space of said buildings to which such additions are made, twenty years.
Additions to municipal buildings
- (5) For the construction of bridges of stone or concrete, or of iron superstructure, twenty years.
Bridges
- (6) For the original construction of streets or highways or the extension or widening of streets or highways, including land damages and the cost of pavement and sidewalks laid at the time of said construction, ten years.
Streets
- (7) For the construction of stone, block, brick, or other permanent pavement of similar lasting character, ten years.
**Per-
manent
pavements**
- (8) For macadam pavement or other road material under specifications approved by the Massachusetts Highway Commission, five years.
**Temporary
pavements**
- (9) For the construction of walls or dikes for the protection of highways or property, ten years.
**Walls
and
dikes**
- (10) For the purchase of land for cemetery purposes, ten years.
Cemeteries
- (11) For such part of the cost of additional departmental equipment as is in excess of 25 cents per \$1000 of the preceding year's valuation, five years.
**Depart-
mental
equipment**
- (12) For the construction of sidewalks of brick, stone, concrete, or other material of similar lasting character, five years.
Sidewalks
- (13) For connecting dwellings or other buildings with public sewers, when a portion of the cost is to be assessed on the abutting property owners, five years.
**Connection
with sewers**
- (14) For the abatement of nuisances in order to conserve the public health, five years.
**Abatement
of nuisances**
- (15) For extreme emergency appropriations involving the health or safety of the people or their property, five years.¹
**Emergency
appropriations**

¹ *Acts 1913*, chap. 719, sec. 5, as amended by *Acts 1914*, chap. 317.

3. Debts may be authorized as above only by a two-thirds vote of all the members of a city council or other governing body taken by yeas and nays and subject to the approval of the mayor, if such approval is required by the charter of the city; and in the cases of towns only by a vote of two thirds of the voters present and voting.¹ Two-thirds vote is necessary
4. Cities and towns may incur debt outside the limit of indebtedness prescribed above for the following purposes and payable within the periods stated below:— Debt outside limit
 - (1) For temporary loans in anticipation of revenue, or in anticipation of the issue of bonds or notes, or in connection with altering grade crossings, or in connection with highway construction in anticipation of reimbursement by the Commonwealth, one year. Temporary loans
 - (2) For establishing or purchasing a system for supplying the inhabitants of a city or town with water, or for the purchase of land for the protection of a water system, or for acquiring water rights, thirty years. Water works
 - (3) For the extension of water mains and for water departmental equipment, five years. Water equipment
 - (4) For establishing, purchasing, extending or enlarging a gas or electric lighting plant within the limits of a city or town, twenty years; but the indebtedness so incurred shall be limited to an amount not exceeding in a town 5% and in a city 2½% of the last preceding assessed valuation of such town or city. Electric light plants
 - (5) For acquiring land for the purposes of a public playground, as specified in section 19 of chapter 28 of the Revised Laws and amendments thereof, thirty years; but the indebtedness so incurred shall be limited to an amount not exceeding one half of 1% of the last preceding assessed valuation of the city or town.² Playgrounds
5. All other debts hereafter incurred by a city or town shall be reckoned in determining its limit of indebtedness, and debts authorized under the provisions just stated, except for temporary loans, must be authorized by the same votes as in the case of debts within the debt limit. Temporary loans, unless in anticipation of the proceeds of bonds or notes (which require no vote at all), require a majority vote.³ Votes necessary outside debt limit
6. Cities and towns may sell bonds, notes, or certificates of indebtedness as authorized above at not Certificates except for temporary loans must be sold at par

¹ Acts 1913, chap. 719, sec. 5.

² Acts 1913, chap. 719, sec. 6. See also sections 2, 3, 4, and 9.

³ *Ibid.*

146 AMERICAN AND FOREIGN INVESTMENT BONDS

less than par at public or private sale. Temporary loans, as described above, to run not over one year may be sold at a discount.¹

7. No further sinking funds for the payment of debts created by cities and towns shall be established, and all loans, except temporary loans to run not over one year, shall be payable in annual installments sufficient to extinguish at maturity the debt created.²

8. The city of Boston shall not assess for ordinary municipal purposes over \$10.55 on every \$1000 of taxable property, according to the average assessed valuation for the preceding three years.³ Other cities in Massachusetts may, after a public hearing, establish by ordinance the maximum rate of taxes to be raised for ordinary municipal purposes, that is, for purposes exclusive of the state tax and other amounts assessed upon the city by the State, the county tax and sums required by law to be raised on account of the city debt. Such maximum rate can be thereafter changed only by a two-thirds vote of the governing body, after a public hearing.⁴

9. During the year 1914 every city and town which has at the time of this act (1913) outstanding notes payable on demand, or which has expended for the general expenses of the city or town trust funds which have not been restored, shall provide for the payment of such notes and for the restoration of such trust funds in the tax levy for the year 1914 where such provision is reasonably practicable. When not practicable, debt may be incurred, outside the limit of indebtedness fixed by law, to the amount necessary to pay the demand notes or restore the trust funds, and serial bonds or notes may be issued payable at periods not later than fifteen years from their respective dates of issue.⁵

A brief discussion of the propriety and wisdom of the above laws and a comparison with the laws of other States may be of interest. The variations are almost numberless, but certain general resemblances and differences may be pointed out.

The first thing to fix in mind is the position of the legislature. As a rule, its action is limited by constitutional restrictions. In some States, however, such as New Hampshire,⁶ Massachu-

¹ *Acts 1913*, chap. 719, secs. 8 and 10.

² *Ibid.*, secs. 13 and 14.

³ *Ibid.*, sec. 18.

⁴ *Ibid.*, sec. 19.

⁵ *Ibid.*, chap. 634.

⁶ Abbott, *Laws of Public Securities*, sec. 495, p. 992.

setts,¹ and Kansas,² the limitation of the creation of debts by counties, municipalities, and other political subdivisions is left to the state legislature without substantial constitutional restrictions. Sometimes the legislature in municipal charters lays down certain limits for the creation of debt;³ sometimes it passes more or less general legislation; and sometimes it authorizes by special acts specific loans.

Authority and action of the Legislature in certain States

The limitation of the debt of cities in Massachusetts to 2½% and of the debt of towns to 3% of the average assessed valuation for the three preceding years, except for temporary loans and except for the acquisition of property which should be self-supporting or for public playgrounds, may be said to be very conservative. This compares with a gross debt limit, with certain exceptions, of 10% in New York State;⁴ a gross debt limit of 2% of the value of taxable property, except obligations incurred for public protection or defense and except gravel road bonds, in Indiana;⁵ a limit for municipalities in Wisconsin⁶ of 5% of the value of taxable property; a limit, with certain exceptions, for cities and towns in Virginia⁷ of 18% of the assessed value of real estate unless further issue is authorized by a majority vote of the people; and in Louisiana,⁸ a limit for municipalities, parishes, and districts, with certain exceptions, of 10% of the assessed value of the property.

Limits on local indebtedness in other States

A practice has crept into the constitutional provisions or laws of some of the States making special exceptions in favor of certain

¹ Abbott, *Laws of Public Securities*, sec. 487, p. 978.

² *Constitution of Kansas*, art. XII, sec. 5.

³ State and City Section of the *Commercial and Financial Chronicle*, May 30, 1914, pp. 32 and 58.

⁴ *Constitution of New York*, art. VIII, sec. 10, as amended November, 1909, in effect January 1, 1910. Birdseye, *Consolidated Laws of New York*, vol. 7, p. 22.

⁵ *Constitution of Indiana*, art. XIII. Burns's *Annotated Indiana Statutes* (Revision of 1914), vol. 1, p. 124.

⁶ *Constitution of Wisconsin*, art. XI, sec. 3. See *Wisconsin Statutes* (1898), vol. 1, p. 122.

⁷ *Constitution of Virginia*, art. VIII, sec. 127. Pollard, *Code of Virginia* (1904), p. ccxlii.

⁸ *Constitution of Louisiana* (1913), art. 281, as amended November 3, 1914. See *Acts of Louisiana* (1914), no. 192, for amendment. Drainage districts, under the above article, are given powers relative to incurring indebtedness up to fifty cents per acre, to be secured by special taxes of like amount.

communities, so as to allow them to issue bonds beyond the amount authorized for other communities in the same State. Examples of a reasonable use of this practice are New York ¹ and Philadelphia ² for expensive permanent improvements, such as subways and docks. Examples of what seem to us illogical and possibly dangerous exceptions are those found in the laws of South Carolina ³ and Alabama.⁴ In South Carolina, especially, the habit has grown up of excepting municipalities from the debt limit for almost any purpose.

In this connection it is to be noted that Massachusetts in its recently enacted legislation, while carefully limiting the creation of debt, has removed the tax limit for municipalities, except in Boston, in all municipalities in the State. This seems to us wise. Removing the tax limit and carefully limiting the creation of debt certainly is more conservative than limiting the tax rate and allowing more or less liberal borrowing. A rise in taxes is noticed sooner and felt more directly by citizens than is an increase in the debt. Tying any community down too tight in both respects may hamper its reasonable development and in the long run make its bonds less safe.⁵

All the purposes for which municipalities in Massachusetts may issue bonds, it will be noted, are of a strictly public character and not for the special benefit of any private individual or corporation. Throughout the United States the most common purposes for which county, municipal, and district bonds may be issued are as follows: Roads, bridges, and county buildings, such as court-houses and jails; parks and playgrounds, sewers, waterworks, and electric

Exceptions in favor of certain communities

Limiting debt and removing tax limit in Massachusetts

Purposes of issue should be of a strictly public character

¹ *Constitution of New York*, art. VIII, sec. 10, as amended 1909. Birdseye, *Consolidated Laws of New York*, vol. 7; cumulative Supplement (1910-13), vol. 1, p. 22.

² *Constitution of Pennsylvania*, art. IX, sec. 8, as amended 1911. Purdon's *Digest* (13th ed.), supplement of 1912, p. 2.

³ *Constitution of South Carolina* (1895), art. X, sec. 6, as amended 1911. See also *ibid.*, art. VIII, sec. 7. See *Code of Laws of South Carolina* (1912), vol. II, pp. 632, 642, 660.

⁴ *Constitution of Alabama* (1901), art. XII, sec. 226. *Code of Alabama* (1907; Criminal), vol. 3, p. 173.

⁵ For difficulties likely to arise in bonds payable out of taxes limited to a certain amount, see *United States v. County of Clark*, 96 U.S. 211, and *State ex rel. Hudson v. Trammel*, 106 Mo. 510; 17 S.W. 502.

lighting plants ¹ and municipal buildings, such as school-buildings, city or town halls, and fire stations.

As examples of authority given municipalities outside of Massachusetts to issue bonds for improper or unwise purposes, mention may be made of the following: Permission for towns in Vermont ² to borrow for the benefit of railroads to an amount not exceeding practically 8% of the assessed valuation; permission for counties and municipalities in Minnesota ³ to create debts in aid of railroads to an amount not exceeding 5% of the taxable property of the municipality; permission for municipalities in Nebraska ⁴ to make donations to a railroad or for other works of internal improvement to an amount not exceeding 10% of the aggregate assessed valuation of the county and subdivisions, provided the proposition shall have been approved by the voters, with permission for an additional amount of 5% by a two-thirds vote; and permission for certain townships in South Carolina ⁵ to issue railroad-aid bonds to an amount not exceeding 8% of the assessed valuation.

Examples of authority to issue bonds for improper or unwise purposes

In a large number of the States, issuing bonds in aid of railroads or for private enterprises, purchasing the stock of private corporations, or loaning the credit of the county or municipality to such corporations specifically is forbidden.⁶ This prohibition is the result of the experience which many counties and some municipalities have had, in

In many States loaning credit of counties and municipalities is forbidden

¹ Two interesting provisions among the laws of many States authorizing municipalities to borrow for the purchase of public utilities are: those in the laws of Michigan authorizing villages to issue mortgage bonds to acquire public utilities without liability on the part of the village; and those in the laws of Mississippi providing that bonds issued for waterworks, gas or electric lighting plants may be secured by pledge of the revenue of such plants. (*Public Acts of Michigan* [1909], chap. 278, sec. 26. See Howell's *Michigan Statutes* [2d ed.], vol. 3, title xvi, chap. 98, sec. 6215. *Laws of Mississippi* [1914], chap. 147, sec. 6.)

² *Public Statutes of Vermont* (1906), sec. 3558.

³ *General Statutes of Minnesota* (1913), secs. 1928 and 1951. See also *Constitution of Minnesota*, art. IX, sec. 15.

⁴ *Constitution of Nebraska*, art. XII, sec. 2. See also *Revised Statutes of Nebraska* (1913), sec. 405.

⁵ *Constitution of South Carolina*, art. x, sec. 6. *Code of Laws of South Carolina* (1912), vol. 2, p. 642. See also *Acts of South Carolina* (1911), nos. 155, 156, 159, 162.

⁶ *Constitution of New Hampshire*, part 2, art. v. *Public Statutes of New Hampshire* (1901), p. 33. Connecticut: *Amendments to the Constitution*, art. xxv. *Constitution of New York*, art. VIII, sec. 10. Birdseye, *Consolidated Laws of New York*, p. 150. *Constitution of Illinois*, art. XIV, separate section; *Revised Statutes of Illinois* (1912), p. LXX.

150 AMERICAN AND FOREIGN INVESTMENT BONDS

issuing bonds in aid of private enterprises, particularly railroads, of finding later that the communities did not get the benefits which they expected and of being obliged or being willing to default on the bonds. The experience of counties and municipalities in this respect has been similar to the experience of many of our States.

Certain States permit municipalities to issue refunding bonds — a practice which should not, except under special circumstances, be permitted. Among such States may be mentioned Vermont,¹ Rhode Island,² Virginia,³ and Alabama.⁴

In the Massachusetts laws, the length of time which bonds may run is based, as far as practicable, on the permanence of the work for which the money is spent. For instance, bonds issued for the purchase of land for parks or playgrounds give the city a permanent asset. Bonds issued even for school-buildings alone give the city property with a life probably of at least twenty years; whereas bonds issued for sidewalks may give the municipality property which will have to be replaced or rebuilt within a short time. The limitation to ten years of bonds issued for cemetery purposes is based probably on the minimum estimate of the length of time the land will be available for cemetery purposes.

In the constitutions or statutes of many of the States, an arbitrary limit is placed on counties, cities, and other political subdivisions as to the length of time which their bonds may run. For instance, bonds in Colorado⁵ must run not less than ten years and not more than fifteen years; bonds in New Hampshire⁶ and in Illinois⁷

In some States the length of time bonds may run is fixed without regard to the purpose of issue

¹ *Public Statutes of Vermont* (1906), chap. 157, secs. 3567, 3572.

² *General Laws of Rhode Island* (1909), title VIII, chap. 46, sec. 21. (Towns only.)

³ *Acts 1908*, p. 535. Pollard's *Virginia Code, Annotated*, vol. 3 (Supplement, 1910), sec. 1038 f, p. 133. See also *Acts 1914*, p. 256. Pollard's *Code Biennial* (Virginia, 1914), sec. 834 b, p. 142.

⁴ *Constitution of Alabama* (1901), sec. 224. See also *Acts of Alabama* (1907), p. 790, sec. 195. *Political Code of Alabama* (1907), art. XXVIII, sec. 1436.

⁵ *Constitution of Colorado*, art. XI, sec. 8. *Mills's Annotated Statutes of Colorado*, p. c 207. See also *ibid.*, chap. 161, sec. 7226, sub-section 6, p. 3028.

⁶ Municipal Bonding Act, *Laws of New Hampshire* (1895), chap. 43, sec. 2. *Public Statutes of New Hampshire* (1901), p. 491.

⁷ *Constitution of Illinois*, art. IX, sec. 12. *Revised Statutes of Illinois* (1912), p. lxxix. See also *Revised Statutes of Illinois* (1912), sec. 700, p. 455; chap. 34, sec. 128, p. 657.

must be paid within twenty years; in Oklahoma,¹ within twenty-five years; in Pennsylvania,² within thirty years; in Texas,³ within forty years, and in California,⁴ with certain exceptions, within forty years.

In many States it is necessary to have all or practically all bond issues of local communities, beyond a certain amount, authorized by a vote of the people; for instance, in Pennsylvania,⁵ a majority vote is necessary; in South Carolina,⁶ a majority of voters who have paid taxes for the previous year; in Utah,⁷ a majority vote of the property taxpayers; in Vermont,⁸ Kentucky,⁹ Missouri,¹⁰ North Dakota,¹¹ and certain other States, a two-thirds vote of the people; and in Oklahoma¹² and Washington,¹³ a three-fifths vote of the people. Provisions of many other States along these lines could be given.

We have discussed above the Massachusetts laws in regard to the creation of local debt, and have compared them with the laws of some of the other States. The creation of debt is one thing and the payment of it is another. The Massachusetts laws¹⁴ compel payment by serial method. The commonest method still, however, in other States is payment through the establishment of sinking funds, created out of annual taxes and calculated to be sufficient with accumulations to pay the principal of the debt at maturity. Payment by serial method is simpler, more scientific, and probably more economical.

¹ *Constitution of Oklahoma*, art. x, sec. 26.

² *Constitution of Pennsylvania*, art. ix, sec. 10. Purdon's *Digest* (13th ed.), vol. 1, p. 199. See Act of April 20, 1874, sec. 1, *Laws of Pennsylvania*, p. 65. Purdon's *Digest* (13th ed.), vol. 3, p. 2721.

³ *Revised Civil Statutes of Texas* (1911), title xviii, art. 618.

⁴ *Constitution of California*, art. xi, sec. 18. Henning's *General Laws of California* (1914), p. 79; *ibid.*, vol. 5, chap. 352, art. 3051, sec. 5.

⁵ *Constitution of Pennsylvania*, art. ix, sec. 8. Purdon's *Digest* (13th ed.), vol. 1, p. 197.

⁶ *Constitution of South Carolina*, art. ii, sec. 13. See also art. 8, secs. 5 and 7.

⁷ *Constitution of Utah*, art. xiv, sec. 3.

⁸ *Public Statutes of Vermont* (1906), chap. 157, sec. 3556.

⁹ *Constitution of Kentucky*, sec. 157.

¹⁰ *Constitution of Missouri*, art. x, secs. 12 and 12A. *Revised Statutes of Missouri*, (1909), chap. 84, art. 2, sec. 8668.

¹¹ *Constitution of North Dakota*, art. xii, sec. 183. *Compiled Laws of North Dakota* (1913), p. ciii.

¹² *Constitution of Oklahoma*, art. x, sec. 26.

¹³ *Constitution of Washington*, art. viii, sec. 6.

¹⁴ *Acts 1913*, chap. 719, sec. 14.

On the whole, the Massachusetts laws, in our opinion, establish a system of creating and paying debt that seems financially sound and politically expedient.¹ They cover in a systematic way all the proper purposes for creating debt; and they provide a safety-valve for the public demand for improvements through the removal of the state limit on the local tax.

Local debt laws in Massachusetts, on the whole, good

In general, it may be said that constitutional or statutory provisions in regard to the creation of local debt which are too strict or too narrow are undesirable. They are likely to lead to a long list of exceptions and special acts² which, in the end, will take much of the effectiveness out of the limitation of debt. The provisions of many States in regard to debt creation by municipalities seem extremely conservative when you begin to read and extremely lax before you finish.

General laws in regard to local debt should not be too strict

Taken by and large throughout the country, the state limitations on the creation of local debts are much more liberal than the provisions governing the creation of state debt. This is, in our opinion, desirable. The credit of the State should be reserved largely for emergencies. Furthermore, the citizens of a city or town are better able to judge of the desirability of any given loan by the municipality than they are of a state loan. In the case of a municipal loan, the citizens get the direct benefit and they carry the immediate burden.

Laws governing local debt more liberal than those governing state debt

Perhaps even more important than the constitutional and statutory provisions regulating the creation and payment of local debt are the following considerations:

Other factors entering into the safety of county, municipal and district bonds

- (1) The amount and character of the population.
- (2) The record of good or bad faith.
- (3) The location, prosperity and probable future growth of the community.

The amount of the population of a county or city is an important consideration. There are just fifty cities, according to the census

¹ In the matter of public credit, all considerations having a bearing on the general status and well-being of the community are relevant.

² Some people have criticized even the new Massachusetts laws in this respect. The right to go to the legislature for special acts is not, of course, taken away, although the inducement to do so is less than under the old laws.

of 1910, with a population of 100,000 or over. New York City is the largest and Albany the smallest of these fifty cities. The ten largest cities of the United States with their population are: ¹

The amount of the population is important

New York, New York.....	4,766,883
Chicago, Illinois.....	2,185,283
Philadelphia, Pennsylvania.....	1,549,008
St. Louis, Missouri.....	687,029
Boston, Massachusetts.....	686,092
Cleveland, Ohio.....	560,663
Baltimore, Maryland.....	558,485
Pittsburg, Pennsylvania.....	533,905
Detroit, Michigan.....	465,776
Buffalo, New York.....	423,715

The direct obligations of the above cities, payable out of taxes levied on all the property within those cities, may be considered, in a general way, the leading municipal securities in the United States. If we should take a limit of 50,000 people or over, we should find a long list of cities with high credit.

More important even than the size of the population in its effect on the real safety of municipal bonds is the character of the population. In the last resort, all debts of any kind depend on the good faith of some person or persons to do as they have agreed and to honor their obligations. The character of the people of the New England States, from the point of view of paying their debts, is perhaps better than that of any other section of the country. The people of New York State likewise have been careful about the payment, if not about the creation, of debt.

The character of the population is important

This leads us to speak of the record of county, municipal, and district bonds and to discuss briefly certain typical defaults. In proportion to the amount of bonds put out, the record of municipal bonds is better than that of state bonds. Perhaps this is true largely because the history of state debts is longer and covers much more of the early development period in the United States, when the population was shifting and the relation of the people to their various

The record of municipal bonds has been better than that of state bonds

¹ *Thirteenth Census of the United States (1910), vol. 1, Population, pp. 78-79.*

government units and to private enterprise was in a more or less chaotic condition. Perhaps, also, the completeness of the legal remedy in the case of municipal bonds has had a tendency to restrict the amount of defaults. At the same time, the amount of defaults in payment of interest or principal of county and municipal bonds, if we include all cases of bonds illegally issued, is considerable. A writer in the "North American Review" many years ago estimated the amount of defaulted county, city, township, and school-district bonds as over \$300,000,000.¹ Included in this total was a large amount of defaulted bonds in such States as Illinois, Missouri, Kansas, Nebraska, and the Dakotas, as well as in the

Causes of
county,
municipal
and district
defaults

South.² As in the case of state defaults, illegality usually has been the excuse rather than the reason.

The principal causes of default in the bonds of counties, municipalities, and districts have been:—

- (1) A furor for improvements similar to that which prevailed at one time in many of our States and which led to financial difficulties at one time or another of such cities as Pittsburg, Pennsylvania,³ Elizabeth, New Jersey,⁴ and Superior, Wisconsin.⁵
- (2) Issue of railroad-aid bonds or bonds for other doubtful or illegal purposes, as in the cases of Macon County, Missouri,⁶ St. Clair County, Missouri,⁷ Green County, Kentucky,⁸ Taylor County, Kentucky,⁹ and Otoe County (Nebraska City Precinct), Nebraska.¹⁰
- (3) Issue of bonds by small, struggling or unstable communities where the property and taxing power proved insufficient to take care of the bonds, as in the cases of Syracuse, Kansas,¹¹ Olympia, Washington,¹² Middlesboro, Kentucky,¹³ and Mobile, Alabama.¹⁴

¹ John F. Hume in the *North American Review*, August, 1884, pp. 129 and 131.

² *Ibid.*, p. 131, and C. M. Harger in *Moody's Magazine*, February, 1906, p. 358.

³ *Commercial and Financial Chronicle*, vol. 24, p. 591. ⁴ *Ibid.*, vol. 28, p. 146.

⁵ *Ibid.*, vol. 79, p. 2107. The defaulted bonds were held by the United States Circuit Court of Appeals to be special assessment bonds.

⁶ *Ibid.*, vol. 92, p. 1191.

⁷ *Ibid.*, vol. 89, p. 1293.

⁸ *Ibid.*, vol. 96, p. 1507.

⁹ *Ibid.*, vol. 95, p. 1760.

¹⁰ *Ibid.*, vol. 72, p. 302.

¹¹ Information given by bankers.

¹² Information given by bankers.

¹³ *Ibid.* See also *Commercial and Financial Chronicle*, vol. 84, p. 404.

¹⁴ *Commercial and Financial Chronicle*, vol. 25, p. 382.

- (4) Special misfortunes, such as yellow fever epidemics in Memphis, Tennessee,¹ and Savannah, Georgia,² and the disastrous floods at Galveston, Texas.³
- (5) Issue of bonds by municipal irrigation districts, where the inherent risk of the enterprise is considerable, such as Denver-St. Vrain Municipal Irrigation District, Colorado,⁴ Denver-Greeley Irrigation District, Colorado,⁵ and San Arroya Irrigation District, Colorado.⁶

The above examples have been chosen not because they are in every case the worst, but because the information is available.⁷

There have been also a few cases of plain bad faith, of which mention may be made of St. Joseph, Missouri,⁸ which voted to compromise and refund a city bonded debt at sixty cents on the dollar with reduced interest when there was no necessity for any default, and Fort Worth, Texas,⁹ which refunded a portion of its old 6% bonds with new 4% bonds without any necessity for such action and without any adequate reason.

A recent attempt at bad faith, which proved little more than amusing, was the effort of the Mayor of Atchison, Kansas, to refund in July, 1913, at a time when municipal bonds were selling to yield from 4½% to 5% net income, old 4% bonds with new 4% bonds at par and his refusal to pay off the old bonds in cash. The result of this attempt was the ruling by the Kansas Supreme Court that it had jurisdiction to require levy of a tax to pay full principal of the bonds and forbidding any tax levy unless provision was made for them.¹⁰

In the matter of the settlement of the claims of bondholders on

¹ *Commercial and Financial Chronicle*, vol. 31, p. 328.

² Investor's Supplement, *Commercial and Financial Chronicle*, January 26, 1878, p. xiii.

³ *Commercial and Financial Chronicle*, vol. 71, p. 564.

⁴ *Ibid.*, vol. 92, pp. 476 and 972.

⁵ *Ibid.*

⁶ State and City Section, *Commercial and Financial Chronicle*, May 30, 1914, p. 145.

⁷ See Appendix, "County and Municipal Defaults," pp. 297-303.

⁸ *Commercial and Financial Chronicle*, vol. 23, pp. 135 and 175; *ibid.*, vol. 25, p. 408; *ibid.*, vol. 28, p. 477.

⁹ *Ibid.*, vol. 69, p. 711, and information received from bankers.

¹⁰ *Levison v. Finney*, no. 18,934, Supreme Court of Kansas. This case never was reported for the reason that it never came to a final hearing on the matter of levying a tax. (Letter from Clerk of Court, November 7, 1914. See Appendix, p. 304.)

defaulted county, municipal, and district bonds, the practice has varied all the way from full settlement of interest and principal, as in the case of Pittsburg, Pennsylvania,¹ on the so-called Penn Avenue bonds, to a failure to pay anything at all, as in the cases of the railroad-aid bonds issued by Green County, Kentucky,² and St. Clair County, Missouri.³ Elizabeth, New Jersey,⁴ Memphis, Tennessee,⁵ and New Orleans, Louisiana,⁶ at one time or another compromised all or a part of their debt on the basis of fifty cents on the dollar. Mobile, Alabama,⁷ issued \$510 in new 6% bonds for every \$1000 of old 8% bonds. Macon County, Missouri,⁸ settled an aggregate claim of \$2,200,000 with \$750,000. Scaling of the principal to a greater or less degree has taken place in many other cases.⁹

On the whole, reduction in interest rather than scaling of the principal has been the rule. Where the amount of bonds has been small and where the prospect has been nothing worse than a scaling in interest, bondholders often have found it more advantageous to accept a slight reduction in interest rather than fight the question through the courts with the possibility in some cases of not being able to collect the amount of the probable judgment.

The attitude of the people toward repudiation of county or municipal obligations has been, perhaps, less radical than the attitude of the people in the cases of certain of our States. With the exception of some of our counties, the proceeds of bonds issued have not been wasted to the same extent as were the proceeds of some of our state bonds. Illegality of issue as an excuse for compromise or repudiation has been used almost as frequently; but the knowledge of the existence of a legal remedy in the case of counties, municipalities, and districts, — suit to compel levy of taxes to pay interest

Settlements
made with
bondholders

Bondholders
often have
accepted re-
duction in
interest rather
than fight
through courts

Attitude of
the people
toward com-
promise or
repudiation

¹ *Commercial and Financial Chronicle*, vol. 28, p. 302.

² *Ibid.*, vol. 77, p. 48; vol. 84, p. 949. These bonds have been practically invalidated by the United States Supreme Court.

³ *Ibid.*, vol. 89, p. 1293. State and City Section, *Commercial and Financial Chronicle*, May 30, 1914, p. 124.

⁴ *Commercial and Financial Chronicle*, vol. 47, p. 50.

⁵ *Ibid.*, vol. 37, p. 202.

⁶ *Ibid.*, vol. 31, p. 606-607.

⁷ *Ibid.*, vol. 21, p. 302.

⁸ *Ibid.*, vol. 92, p. 1191.

⁹ For leading steps in the history of certain county and municipal defaults and settlements, see Appendix, pp. 297-300.

and principal of bonds, — and of the disposition of the courts to interpret legality of issue strongly in favor of maintaining good faith, have caused the people and their representatives to take a firmer attitude toward the payment of their debts. As a rule, the extent of the effort toward compromise or repudiation has depended on the character of the population.

Aside from the defaults and compromises on municipal bonds, there has been in local finances, especially of recent years, a considerable amount of mismanagement which has threatened to lead to financial difficulties. This situation has been met sometimes by passing careful general laws governing finances of municipalities, as in Massachusetts, and sometimes by establishing a commission form of government,¹ which has been done in the cases of Lawrence, Massachusetts,² Omaha, Nebraska,³ Denver, Colorado,⁴ and New Orleans, Louisiana.⁵

Mismanagement of local finances

In addition to the size and character of the population and the record of good or bad faith, the factors of location, present prosperity, and probable future growth are important. These are questions which can be looked up fairly easily in the cases of most of our cities and towns. In addition to the national and state censuses, the growth of cities often may be indicated by changes in postal receipts, bank clearings, school attendance, and other similar indices.

Location, present prosperity, and future growth of communities are important

In connection with municipal bonds, there are two factors which should always be borne in mind: (1) That the obligations in order to be legally binding must be legally issued; and (2) that the certificates must be genuine⁶ and in proper form. The legality of the issue of municipal bonds is taken care of usually by bankers obtaining the opinion of first-class

Legality of issue and certification as to genuineness

¹ According to the *Boston News Bureau*, June 12, 1914, 69 cities out of 195 having an estimated population of 30,000 or over have adopted the commission form of government. Dayton, Ohio, is given as the only city of 30,000 people or over having the "city manager plan."

² State and City Section, *Commercial and Financial Chronicle*, May 30, 1914, p. 24.

³ *Ibid.*, p. 130.

⁴ *Commercial and Financial Chronicle*, vol. 96, p. 580; vol. 97, p. 1522.

⁵ *Ibid.*, vol. 95, p. 634.

⁶ See the case of forgery of town notes in Framingham, Massachusetts, *Franklin Savings Bank v. Inhabitants of Framingham*, 212 Mass. 92.

lawyers. The genuineness of the certificates often is arranged by certification by some bank or trust company or, as in the case of town notes in Massachusetts ¹ and bonds in North Dakota, ² Nebraska, ³ and Texas, ⁴ by certification by some state bureau or by state and county officials. ⁵

During the past twenty-five years and especially during the past ten or a dozen years, there has been a large increase in the amount of county, municipal, and other local debt. The accompanying table shows aggregate net debt, or indebtedness less sinking-fund assets, and net debt *per capita* of counties, cities, towns, villages, townships, school districts, and other subdivisions in the United States for 1890, 1902, and 1913, together with percentages of increase. ⁶

<i>Date</i>	<i>Debt less sinking-fund assets</i>	<i>Per cent increase 1890-1902 and 1902-1913</i>	<i>Per-capita debt less sinking-fund assets</i>	<i>Per cent increase 1890-1902 and 1902-1913</i>
1890	\$925,989,603		\$14.79	
1902	1,630,069,610	76.0	20.74	40.2
1913	3,475,954,353	113.2	35.81	72.6

While practically all these increases represent the creation of debt for purposes which, broadly speaking, are entirely proper, ⁷ and while due allowance must be made for the great growth of the country during this period, the amount of increase certainly is

¹ *Acts 1910*, p. 616, as amended by *Acts 1912*, chaps. 45 and 49. See also *Acts 1915*, chaps. 84 and 285.

² *Constitution of North Dakota*, art. XII, sec. 187.

³ *Constitution of Nebraska*, art. XII, sec. 2.

⁴ *Acts 1895*, p. 184; *Acts 1901*, p. 16. *Revised Civil Statutes of Texas* (1911), title XVIII, arts. 619-625.

⁵ In Georgia, the validity of proposed bond issues is determined in advance by the Superior Court: and when judgment is given in the affirmative, the bonds never thereafter can be questioned. (*Acts 1897*, p. 82; *Code of the State of Georgia* [1911], secs. 445-451.)

⁶ Department of Commerce, Bureau of the Census, *Wealth, Debt, and Taxation* (1913), vol. I, pp. 234-35.

⁷ For value of public properties and assets of funds, other than sinking funds, of counties in 1913, see Department of Commerce, Bureau of the Census, *County Revenues, Expenditures, and Public Properties, 1913* (Washington, 1915), p. 298; and for figures in regard to incorporated places having a population of 2500 and over, see Department of Commerce, Bureau of the Census, *Municipal Revenues, Expenditures, and Public Properties, 1913* (Washington, 1915), p. 336.

startling. During the past twelve or fifteen years, large sums have been expended for parks, playgrounds, and other permanent improvements. It is hard to escape from the conclusion that this great increase in local debt is part of the general extravagance which characterized the period.¹

Perhaps we might say, with the likelihood of being right, that the increase in municipal debt in the next few years would be proportionately less than in the past few if it were not for the more or less general movement under way to-day toward the acquisition by municipalities of street rail-ways and of gas and electric lighting plants. We find that even in Massachusetts municipal ownership of electric lighting plants has spread to a considerable extent.² We find in addition municipal lighting plants in Vermont, Connecticut, New York, Pennsylvania, Ohio, Michigan, Kansas, Oregon, North Carolina, and many other States.³

The total local debt in 1913, as given by the United States Census, is made up as follows: ⁴

Increasing
issue of bonds
to acquire pub-
lic utilities

Distribution
of local
debt 1913

	Amount	Per cent of total
Counties.....	\$371,528,268	10.7
Cities, towns, villages, etc.....	2,985,555,484	85.9
School districts.....	118,870,601	3.4
Total.....	\$3,475,954,353	100.0

This shows the bulk of our local debt to be debts of cities, towns, and villages.⁵

¹ For short discussion of increase in local debts of Great Britain, France, and Germany, see Hirst, *Credit of Nations* (Washington, 1910), pp. 39, 94, and 72. For an early discussion of municipal debt in the United States, see *Atlantic Monthly*, vol. xxxviii, pp. 661-73 (Charles Hale, "Municipal Indebtedness").

² See *Twenty-ninth Annual Report*, Board of Gas and Electric Light Commissioners (Boston, 1914).

³ State and City Supplement, *Commercial and Financial Chronicle*, May 30, 1914, *passim*. The debt of local communities in Great Britain for public utilities is large. See Hirst, *Credit of Nations* (Washington, 1910), p. 45.

⁴ *Wealth, Debt, and Taxation*, 1913, vol. 1, p. 235.

⁵ The proportion which local debt bears to national and to state debt may be seen from the following figures for 1913: Nation, \$1,028,564,055; States, \$345,942,305; minor divisions, \$3,475,954,353; total, \$4,850,460,713. (*Wealth, Debt, and Taxation*, 1913, vol. 1, p. 229.)

160 AMERICAN AND FOREIGN INVESTMENT BONDS

Owing somewhat to the large increase in the supply of municipal bonds, but still more to the decline in the prices of all long-time, high-grade bonds, municipal bonds have been selling during the past two or three years at or near the lowest prices for over twenty years. The following table shows prices on an income basis of the bonds of some of our leading cities in January, 1902, and January, 1912: —

Cities	Net yield	
	1902	1912
Boston, Massachusetts.....	3.10%	3.90%
New York, New York.....	3.12%	4.10%
Philadelphia, Pennsylvania.....	3.00%	3.90%
Chicago, Illinois.....	3.20%	4.00%
Milwaukee, Wisconsin.....	3.25%	4.00%
St. Paul, Minnesota.....	3.20%	4.00%

If we capitalize a thirty-year 4% bond on a 3% basis, we get a price of 119.69 and interest; if we capitalize the same issue on a 4% basis, we get, of course, a price of 100 and interest. If we do the same thing with a twenty-year 4% bond, we get a price of 114.96 and interest for a 3% basis and a price of 100 and interest for a 4% basis. These figures represent very fairly, we think, the extent of the decline in the prices of the leading city bonds between 1902 and 1912.¹

The effect of the European war on the prices of municipal bonds has been considerable. The following prices (see table on page 161), obtained by reducing basis prices given in dealers' lists to definite prices for twenty-year 4% bonds, may be of interest.²

The prices given in the table show an average decline for the year of 2.43 points.

¹ Prices taken from circulars of leading bond dealers for January, 1902, and January, 1912.

² The prices of New York City bonds are reduced from the New York Stock Exchange prices as given in the *Commercial and Financial Chronicle*, vol. 99, p. 32, and vol. 101, p. 34.

	<i>July, 1914</i>	<i>July, 1915</i>
	(And interest)	(And interest)
Boston, Massachusetts, registered.....	100.00	99.32
Providence, Rhode Island.....	100.69	99.32
New York, New York.....	100.00	96.25
Cleveland, Ohio.....	98.64	96.65
Minneapolis, Minnesota.....	99.18	95.04
Memphis, Tennessee.....	94.72	91.59*
Portland, Oregon.....	97.31	95.35

* Lowest offering.

In closing this chapter, we would give as our opinion that county, municipal, and district bonds are among the safest mediums of investment in the world. As far as the record for past performance goes, municipal bonds are entitled to greater consideration than any of our state bonds except the very best. To-day the laws governing the creation of debt by municipal or quasi-municipal corporations are conservative enough to make investment in the bonds of communities even of moderate size exceedingly safe.

On the whole,
municipal
bonds are ex-
ceedingly safe

CHAPTER V

STEAM-RAILROAD BONDS

RAILROAD bonds may be defined as the obligations of railroad companies operating their properties usually with steam and doing a general freight and passenger business.

Such bonds may be of various kinds: that is, first mortgage, consolidated mortgage, general mortgage, collateral trust, debenture, or income bonds. A first-mortgage bond, as its name implies, is secured by a first mortgage on all or a part of the property of the railroad company. A consolidated-mortgage bond usually is secured by a first mortgage on a portion of the road and by a junior mortgage on the rest. A general-mortgage bond usually is secured by a junior mortgage on all or most of the road. A collateral-trust bond is secured, as a rule, by deposit with the trustee of stocks or other bonds or both.¹ A debenture bond may be described as a long-term note without security other than the general credit of the company.² An income bond is a bond the interest on which is payable when earned. Any one of the above kinds of bonds may be convertible, although the usual form is the convertible debenture, that is, a long-term note of the company convertible into stock.

In addition to the above kinds of securities, all which may be called strictly railroad bonds, there are equipment bonds³ issued for say 90 per cent of the cost of new equipment and payable in annual or semiannual in-

¹ Sometimes an entire issue of first-mortgage bonds is deposited, as in the case of *Père Marquette Railroad (Lake Erie & Detroit River Railway)* 4½% bonds, due August 1, 1932. The effect of this is to make the collateral-trust bonds substantially a first mortgage on the property covered by the collateral.

² In Massachusetts there have been issued by various railroad companies, such as the *Boston & Albany Railroad*, the *Old Colony Railroad*, and the *Boston & Maine Railroad*, so-called "plain" bonds. These bonds are debentures with a provision that no mortgage can be placed on the property without including the debentures. See *Acts 1913*, chap. 784, sec. 15, and *Acts 1854*, chap. 286, sec. 3.

³ The title to the equipment rests usually with the equipment bondholder until the last installment is paid off.

stallments covering a period of perhaps ten years; terminal bonds, secured on freight or passenger terminal property including real estate, and often guaranteed by railroad companies; and short-term notes, having usually from one to three years to run.

The considerations which determine the strength of railroad bonds are considerably different from those applying to government, state, or municipal bonds. The latter classes are payable out of taxes, whereas railroad bonds are payable out of the property or earnings of the corporation.

Railroad bonds payable not from taxes, but from property or earnings

In considering the safety of railroad bonds, the vital questions are:—

Leading factors governing safety of railroad bonds

(1) Relation of assets or property to debt.¹

(2) Relation of net earnings to fixed charges.

In case of default in interest or principal of mortgage bonds, the bondholders have the right to foreclose on the property, just as the holders of real-estate mortgages have the right in case of default to foreclose on the real estate. In the case of default on plain or debenture bonds, the bondholders have the right to sue at law on the bonds and also on the coupons, but stand on no better footing than other unsecured creditors.² As far as legal rights go, first-mortgage bondholders have the right to have their entire claim paid from the proceeds of foreclosure sale before anything goes to the holders of second-mortgage or debenture bonds. As a matter of history and practice, however, holders of defaulted first-mortgage bonds often have had, like other bondholders, their claim satisfied in reorganization through the issue of new securities in place of their old bonds.³ This subject will be discussed more fully later on in this chapter.

Remedies for non-payment

¹ In determining the strength of collateral-trust bonds or guaranteed bonds, there are two or more companies to be considered instead of one; that is, in the case of collateral-trust bonds, not only the issuing corporation, but also the corporation or corporations responsible for the value of the collateral; and in the case of guaranteed bonds, not only the issuing but the guaranteeing corporation.

² In England the word "debenture" usually implies a charge upon the property of the corporation and a priority over subsequent creditors and over existing creditors not possessing such a charge. Depending, of course, on the terms used in each case, it may be said, in general, that a debenture in England partakes of the nature of an equitable mortgage. See Jones, *Corporate Bonds and Mortgages* (3d ed.), sec. 32.

³ It is to be remembered that in many railroad receiverships and reorganizations certain underlying issues are not in default and are not disturbed at all.

Beginning in England and in this country in an important way in the early thirties, the railroad business has shown an enormous and almost continuous growth from that time until the present. The first railroad of any importance in England was the Liverpool & Manchester Railway opened for public traffic in 1830 "with eight of Messrs. Stevenson & Co.'s locomotive-engines."¹ In the United States, the first important railroad was the Baltimore & Ohio, which had in operation twenty-three miles of road in 1830. It was for two years thereafter worked with horse power.² Among other early railroads in the United States were the Boston & Providence, the Boston & Lowell, the Erie, the Philadelphia & Reading, and portions of the New York Central and Delaware & Hudson systems. A short time before and not long after the Civil War many of the western railroads were built, such as the Chicago, Burlington & Quincy, the Chicago, Milwaukee & St. Paul, the Chicago & Northwestern, the Illinois Central, the Atchison, Topeka & Santa Fé, and the Union Pacific. In 1832, there were in operation in the United States only 229 miles of line; in 1912, there were in operation 246,816 miles.³

Outside of public securities and possibly real estate, railroad securities are the best-known medium of investment throughout the civilized world. Until the past fifteen or twenty years in this country, steam railroad bonds practically have divided with government, state, and municipal issues the entire bond market.

In our opinion there are many considerations, however, which should prompt investors to use great care in selecting railroad bonds. It is to be remembered: (1) that in most cases, railroads in the United States are engaged in a competitive business, that is, in any given territory of any considerable size, there are usually two or more important railroad systems competing

Beginnings
and growth
of the railroad
business

Steam railroad
bonds long
have been a
popular
medium of
investment

Conditions
surrounding
the railroad
industry call
for the exer-
cise of great
care on the
part of
investors

¹ Alexander Gordon, *A Treatise on Elemental Locomotion, etc.* (London, 1836), p. 55.

² Poor's *Manual of Railroads for 1872-73*, p. xxvi. The first tram-road in the United States was opened in 1826. It ran from the Quincy Granite Works in Massachusetts to the Neponset River and was operated with horse power. (Poor's *Manual for 1869-70*, p. xxii.)

³ Poor's *Manual of Railroads for 1912*, Introduction, p. cxxxvii, and Interstate Commerce Commission, *Twenty-fifth Annual Report on the Statistics of Railways in the United States* (Washington, 1914), p. 11.

with each other more or less keenly; (2) that the gross income of railroads, owing to the fact that it is derived in most cases largely from the movement of freight, may fall off a good deal in times of general business depression; (3) that the railroads have been and are now subject to dual and more or less conflicting regulation by federal and state authorities; (4) that, owing to a variety of causes, the cost of financing and operating the railways, particularly during the past fifteen years, has risen without the railways having been able to obtain a sufficient increase in earnings to offset the increased cost. These conditions, combined in many cases with incapable or dishonest management, have led from time to time to very unfortunate results for investors.

With a few notable exceptions — of which we may mention now the New York Central, the Pennsylvania, the Chicago, Burlington & Quincy, the Chicago, Milwaukee & St. Paul, and the Illinois Central — the important railroad systems now serving the United States have been in the hands of receivers or have been reorganized, in whole or in part, from one to three times. Out of a total bonded debt for all roads, January 1, 1875, of about \$2,000,000,000, there were in default at some time between September 20, 1873, and January 1, 1876, bonds amounting to \$783,967,665.¹ The following table² shows the number, mileage and total capitalization of railroads placed in the hands of receivers for the years involving the largest total capitalization from 1876: —

<i>Year</i>	<i>Number of roads</i>	<i>Miles of road</i>	<i>Bonds and stocks</i>
1876.....	42	6,662	\$467,000,000
1884.....	37	11,038	714,755,000
1893.....	74	29,340	1,781,046,000
1908.....	24	8,009	596,359,000
1913.....	17	9,020	477,780,820
1915.....	12	20,143	1,070,808,628

On June 30, 1894, there were in the hands of receivers 192 rail-ways operating 40,819 miles of road and with a total capitalization

¹ *Commercial and Financial Chronicle*, vol. 22, p. 76.

² *Railway Age Gazette*, December 31, 1915 (vol. 59), p. 1222.

of about \$2,500,000,000.¹ The roads in the hands of receivers at this time operated nearly one fourth of the mileage and had nearly one fourth of the total capitalization of all the railroads in the United States.² In October, 1915, there were in the hands of receivers 41,988 miles of road with a total capitalization of \$2,264,002,178.³

A variety of causes may be given to account for these experiences, but the leading reasons may be given as follows: (1) Overbuilding of railroads or building ahead of the growth of the country;⁴ (2) heavy bonded debts and fixed charges; (3) unrestrained competition; (4) increased costs of labor, materials, and supplies, and increased taxes; (5) mismanagement, misjudgment, or lack of integrity of those in control; (6) excessive interference on the part of legislatures, commissions, and other government bodies; (7) the industrial depressions following the panics of 1873, 1884, 1893, and 1907.⁵

Leading causes
of railroad
troubles

A brief statement⁶ of some of the forms which railroad difficulties took in cases of certain individual railroads may be of interest. (See page 167).

Since the receiverships following 1893, there have been two periods in which railroad difficulties have become of considerable importance: one after the panic of 1907, when such roads as the

¹ Interstate Commerce Commission, *Seventh Annual Report on the Statistics of Railways in the United States* (Washington, 1895), p. 10.

² *Ibid.*, pp. 12 and 41.

³ *Railway Age Gazette*, October 15, 1915 (vol. 59), p. 676. The figures include two small Canadian roads.

⁴ Between 1870 and 1885, the total miles of road in the United States increased from 52,922 miles to 128,320 miles, or over 142 per cent; between 1880 and 1895, a period of fifteen years, the total mileage increased from 93,262 miles to 181,115 miles, or over 94 per cent. (See Introduction to Poor's *Manual of Railroads for 1912*, p. cxxvii.)

⁵ See *Commercial and Financial Chronicle*, vol. 22, p. 76; Investors' Supplement of the *Commercial and Financial Chronicle*, October 25, 1884, p. 1; Introduction to Poor's *Manual of Railroads for 1885*, pp. v to x; Investors' Supplement of the *Commercial and Financial Chronicle*, March 31, 1894, p. 2; Poor's *Manual of Railroads for 1895*, pp. v to viii. (The depression of 1913 and the effect of the European War might be added.)

⁶ The material for the accompanying table has been taken from Stuart Daggett, *Railroad Reorganization* (Boston and New York, 1908), pp. 16-17, 20-22, 34-40, 48, 51, 53-54, 58-59, 61, 75, 77, 81, 96-101, 118, 121-26, 158, 164, 166-68, 175-78, 193, 196-97, 199, 202, 204-09, 221-24, 228-29, 231-33, 235-36, 240, 264-65, 267, 280-81, 284, 286-87, 289.

<i>Railroad</i>	<i>Date</i>	<i>Form of failure.</i>	<i>Causes of trouble</i>
<i>Erie.</i> (New York & Erie R.R.) (Erie Railway.) (New York, Lake Erie & Western Railroad.)	1842	Assignment.	Difficulty of getting enterprise under way.
	1859	Receivership.	Rate war with N.Y. Central. Heavy storms and ice floods, 1857. Panic of 1857 and depression which followed.
	1875	Receivership.	Gross overcapitalization and waste of assets under Gould and Fisk. Inadequacy of previous reorganizations. Severe competition. Falsification of accounts and payment of dividends not earned. Six-foot gauge.
	1884	Default followed by reorganization without receivership or foreclosure.	Heavy capitalization of previous reorganization. Irregularities. Failure of Grant & Ward.
<i>Northern Pacific Railroad.</i>	1893	Receivership.	Failure of previous reorganization to reduce fixed charges sufficiently. Prohibition of pooling. Unprofitable lease of the N.Y., Penn. & Ohio.
	1875	Receivership.	Lack of population and business in territory served. Failure of Jay Cooke & Co. before completion of the road.
<i>Philadelphia & Reading Railroad.</i>	1893	Receivership.	Extensive building and purchase of unprofitable branches. Unprofitable leases. Unwise distributions to stockholders.
	1880	Receivership.	Heavy capitalization. Excessive and indiscriminating purchases of coal lands.
	1884	Receivership.	Inefficiency of previous reorganization. Unprofitable leases and purchases. Payment of dividends not earned.
	1893	Receivership.	Lack of profit in coal-holdings of the Philadelphia & Reading Coal & Iron Company. Unprofitable leases. Purchases of stock of the Boston & Maine Railroad and other New England railroads to an extent not justified by the resources of the Reading.
<i>Atchison, Topeka & Santa Fe Railroad.</i>	1889	Reorganization without receivership or foreclosure.	Competitive overbuilding and extensions into thinly settled territory.
	1893	Receivership.	Overexpansion, including acquisition of the St. Louis & San Francisco Railroad. Conversion of income bonds of previous reorganization into bonds carrying a fixed charge. Misrepresentation of the earnings and true condition of the company.
<i>Southern system.</i> (Richmond & W. P. Terminal Ry. & Warehouse. Richmond & Danville R.R. Central R.R. & Bkg. of Georgia.) <i>Union Pacific Railway.</i>	1892	Receiverships.	Large part of mileage unprofitable. Poor physical condition. Graft and mismanagement.
	1893	Receivership.	High original cost of construction, including the Credit Mobilier scandal. Consolidation with the Kansas Pacific and Denver Pacific Railroads on absurd terms, and acquisition of other lines at the dictation and for the profit of Jay Gould. Severe competition. Rapid extension of unprofitable branch line mileage.
<i>Baltimore & Ohio Railroad.</i>	1896	Receivership.	Excessive competition, through rate-cutting and other methods, leading to a gradual weakening of the whole financial structure of the company. Irregularities of those in control. Payment of dividends not earned.

Seaboard Air Line, Chicago Great Western, Western Maryland, and Wabash were placed in the hands of receivers; and another in 1913 to 1915, when the St. Louis & San Francisco, Cincinnati, Hamilton & Dayton, International & Great Northern, Rock Island, Missouri Pacific, Missouri, Kansas & Texas, and many other roads were placed in the hands of receivers.¹ The difficulties of these railroads have been too recent to make possible a careful and impartial statement of the special causes of failure.

A consideration of the specific causes of many of our earlier railroad troubles shows that these difficulties were caused partly by the general conditions surrounding railroad operation and partly by the lack of judgment or unscrupulous management of those who controlled the properties. Just how far one set of causes and how far the other affected the results in any given case it is impossible to say.

In 1887, a step was taken which has led already to important restraints on the management of railroads by private interests. This was the establishment of the Interstate Commerce Commission.² Originally this commission simply heard cases of alleged unjust discrimination in service and rates, and the Commission found most of these cases to be not well founded.³

Later the Commission received additional powers. In 1906, it obtained the power not merely to set aside existing railroad rates as unjust or unreasonable, but to establish new ones.⁴ In 1910, it obtained authority to sus-

¹ In October, 1915, it seems reasonable to say that the railroads as a whole have "turned the corner," for the time being, from their most acute troubles.

² An act to regulate commerce, approved February 4, 1887, and in effect April 5, 1887 (24 Stat. L. 379), as amended by an act approved March 2, 1889 (25 Stat. L. 855); by an act approved February 10, 1891 (26 Stat. L. 743); by an act approved February 8, 1895 (28 Stat. L. 643); by an act approved June 29, 1906 (34 Stat. L. 584); by a joint resolution approved June 30, 1906 (34 Stat. L. 838); by an act approved April 13, 1908 (35 Stat. L. 60); by an act approved February 25, 1909 (35 Stat. L. 648); by an act approved June 18, 1910 (36 Stat. L. 539); by an act approved August 24, 1912 (37 Stat. L. 566); by an act approved March 1, 1913 (37 Stat. L. 701). See *U.S. Compiled Statutes* (1913), vol. 4, Title LVIA, chap. A, secs. 8563-8604.

³ See Charles Lee Raper, *Railway Transportation* (New York and London, 1912) p. 264. Also *Reports*, Interstate Commerce Commission, *passim*.

⁴ Act approved June 29, 1906 (34 Stat. L. 584).

pend changes in rates pending a hearing.¹ This power to suspend rates is the power of which the railroad managers have complained at times so bitterly. The Commission in these matters may act on its own initiative.

In addition to the regulation exercised by the Interstate Commerce Commission, there has been an immense amount of regulation and attempted regulation by state legislatures and later by state public-service commissions. According to James J. Hill: "Within three years, ending in 1907, twenty-five States enacted car-service laws,² twenty-three regulated train service and connections, twenty-two fixed maximum passenger rates, nine enacted maximum freight rates, thirty-six regulated the general corporate affairs of common carriers." * To be included, perhaps, in the last-named class of legislation may be mentioned laws forbidding combination and consolidation, compelling changes in construction of road or rolling-stock, and shortening the hours of labor of employees.⁴ Many of these laws were enacted without any adequate examination or proper understanding of their fairness, and many of them later were declared unconstitutional by the courts.⁵

Regulation by
state legis-
latures and
public-service
commissions

In general it may be said that, under present conditions, the relation of steam railroads to the public is in great confusion. Unlike street-railway, gas, and electric light properties located wholly within one State, most of the steam railroads are subject to regulation both by the Federal Government and by individual States. The viewpoint of the railroad men is expressed as follows: "A misdirected public opinion is demanding rates too low, taxes too high, wages too high, service too elaborate, and there are not cents enough in the dollar to meet all these demands and still permit the business to be attractive enough so the man with a dollar will invest it."⁶ It is to be

Relation of
steam railroads
to the public
is in great
confusion

¹ Act approved June 18, 1910 (36 Stat. L. 539, sec. 12).

² For a discussion by railroad interests of the so-called "full-crew laws," see Bureau of Railway Economics, *The Arguments for and against Train-Crew Legislation* (Washington, D.C., 1915), consecutive no. 73.

³ James J. Hill, *Highways of Progress* (New York, 1910), p. 272.

⁴ For citation of some of these laws, see Appendix, pp. 305-306.

⁵ For examples of such laws which have been held unconstitutional, see Appendix, pp. 306-307.

⁶ Howard Elliott, *The Truth About the Railroads* (Boston and New York, 1913), pp. 154-55.

noted that at least three different bodies are in a position to interfere with the net income of railroads: that is, (1) the Interstate Commerce Commission may suspend or reduce rates; (2) the state legislatures or commissions may reduce rates and may prescribe regulations which will increase expenses; and (3) arbitration boards may raise wages.¹

Furthermore, the regulation of any given railroad by the States through which its lines run may conflict, not only as to service and rates, but in the matter of issue of new securities.

Regulation by
States of issues
of securities

Interstate railroads under present conditions sometimes have to obtain the authority of two or more States in order to finance themselves. Examples of this may be found in our New England railroads, where, for instance, the consent of New York State as well as of Massachusetts is necessary for the issue of bonds by the Boston & Albany Railroad; of Maine, New Hampshire, and Massachusetts for the issue of securities by the Boston & Maine Railroad; and of Massachusetts and New York for security issues by the New York, New Haven & Hartford Railroad.²

In view of the fact that interstate traffic, according to James J. Hill, constitutes from 65 to 97 per cent of the total traffic over

Solution of the
problem may
lie in control
by the Federal
Government
alone

large areas of the country,³ and in view of the difficulty of distinguishing between state and interstate traffic,⁴ it would seem that the final solution of this difficult question lies in some form of control by the Federal Government alone.

A step in this direction was attempted in the decision of Judge Sanborn, of the United States Circuit Court, in the so-called Minnesota Rate Cases.⁵ The legislature of the State of Minnesota

¹ Arbitration, however, is not compulsory. See "An Act providing for mediation, conciliation, and arbitration in controversies between certain employers and their employees," approved July 15, 1913 (*Public Laws of the United States of America* [63d Cong., 1st Sess., 1913], chap. 6, 38 Stat. L. part 1, p. 103).

² Maine, *Laws 1913*, chap. 129, sec. 35; Massachusetts, *Acts 1913*, chap. 784, sec. 16; New Hampshire, *Laws 1911*, chap. 164, sec. 14a, as amended by *Laws 1913*, chap. 145, sec. 14; New York, *Consolidated Laws of the State of New York* (1910), vol. ix, chap. 48, sec. 55, and chap. 49, sec. 8, par. 10.

³ *Highways of Progress*, p. 280. See also Raper, *Railway Transportation*, p. 252.

⁴ See Marshall M. Kirkman, *Railway Rates and Government Control* (Chicago & New York, 1892), pp. 295-301.

⁵ *Shepard v. No. Pac. Ry. Co.*, 184 Fed. 765. (1911.)

had enacted statutes reducing passenger fares within that State about 33 $\frac{1}{3}$ per cent and reducing freight charges on certain commodities within the State about 7.37 per cent. By orders of the Minnesota Railroad and Warehouse Commission, general merchandise freight charges on shipments wholly within the State were reduced by from 20 to 25 per cent, and certain specific charges on freight shipped from distributing points just within the border of the State to other points in the State were reduced. Suits were brought by shareholders of the railroads affected involving the question whether the orders of the commission, and the acts of the legislature described, substantially burdened and regulated interstate commerce on the railroads of these companies. Judge Sanborn found that "each of the acts and orders challenged has the natural and necessary effect substantially to burden and directly to regulate interstate commerce, to create undue and unjust discriminations between localities in Minnesota and those in adjoining States, and it is unconstitutional and void." He said further: "To the extent necessary completely and effectually to protect the freedom of and to regulate interstate commerce the nation by its Congress and its courts may affect and regulate intrastate commerce, but no farther. To the extent that it does not substantially burden or regulate interstate commerce a State may regulate the intrastate commerce within its own borders, but no farther. If the plenary power of the nation to protect the freedom of and to regulate interstate commerce and the attempted exercise by a State of its power to regulate intrastate commerce, or the attempted exercise of any of its other powers, impinge or conflict, the former must prevail and the latter must give way, because the Constitution and the acts of Congress passed in pursuance thereof are the supreme law of the land, and 'that which is not supreme must yield to that which is supreme.'" This decision, it seems to us, would have the practical effect of giving the Federal Government substantial control of almost all railroads.

The decision later was reversed by the United States Supreme Court¹ in an opinion delivered by Mr. Justice Hughes. The court took the position that (1) although the power of Congress over interstate commerce is paramount, and (2) although a State has

¹ *Simpson et al. v. Shepard*, 230 U.S. 352. (1913.)

Decision of
lower court
in Minnesota
Rate Cases

no power to regulate directly interstate commerce, and (3) although, whenever Congress exercises its power over interstate commerce in any respect, no state action of any kind can modify or impair directly or indirectly such national action, yet (4) the several States have power, in the absence of action by the Federal Government, to regulate their own intrastate commerce and (5) state regulation of intrastate commerce is not void by reason merely of its indirect effect on interstate commerce, unless it conflicts with some actual exercise by Congress of the national power over interstate commerce.

In the *Shreveport Rate Cases*,¹ in which also the opinion was delivered by Mr. Justice Hughes, the court took the position that where the Interstate Commerce Commission previously had fixed an interstate rate on a basis higher than that permitted by the State of Texas for intrastate rates, the interstate rate should prevail. In the *Minnesota cases*, the railroads could avoid that "unjust discrimination" which Congress had forbidden by reducing their interstate rates to the basis of the Minnesota intrastate rates; but in the *Shreveport cases*, the railroads could not do this, because the rate already fixed by the paramount national authority was higher than that allowed by the state authorities. The only alternative was to disregard the Texas intrastate rates.

We have discussed these two cases rather fully for the reasons that they are both fairly recent and also because they bring out the ever-recurring difficulties of harmonizing state and federal control of railroad rates. While the two decisions of the Supreme Court are not inconsistent, it may be fair to say that in one case emphasis is laid on the state power over rates, whereas in the other it is laid on the federal power over rates.

A possible escape from this situation may be either (1) the federal licensing of all railroads doing an interstate business or (2) the federal incorporation of all interstate railroads. Under the first plan, the railroads would

Decision of the
United States
Supreme Court
in the *Minne-
sota Rate Cases*

Comparison of
*Minnesota and
Shreveport
Rate Cases*

Significance of
the Supreme
Court decisions
in the two cases

Federal license
or federal
incorporation

¹ *Houston, East & West Texas Railway et al. v. United States et al.*, 234 U.S. 342. (1914.)

retain their state charters, but would obtain permission to do an interstate business only on such terms as the Federal Government might impose, which permission might amount practically to exclusive federal regulation. Under the second plan, the railroads doing an interstate business could get rid entirely of state regulation. In the words of the former Commissioner of Corporations, "The one merit of the federal incorporation plan is that it is based upon a clean-cut, legal theory, that it brings the entire matter of interstate commerce under one jurisdiction, and reduces to a minimum the friction that must occur between federal and state authorities in the attempt on the part of the Federal Government to regulate interstate commerce."¹ Either federal licensing or federal incorporation of the interstate railroads would be a long step toward exclusive federal control of all the railroads, and therefore toward the solution of this phase of the railroad problem.

We have spoken of exclusive federal control as probably the best solution of this conflict between federal and state authority over the railroads. We have suggested federal licensing or federal incorporation of interstate railways. There is ^{Government ownership} another alternative. That alternative is government ownership.²

Government ownership may work out in two ways: (1) Ownership and operation by the Government; (2) ownership by the Government and lease to private companies for operation. This latter method was recommended in 1881 ^{Government ownership may take two forms} by an Italian commission which investigated the entire subject of government ownership in practically all countries.³ In general, however, we will discuss government ownership as being synonymous with government operation.

¹ *Report, Commissioner of Corporations, December, 1904, Appendix C, pp. 61 and 62.*

² The only experiments which the United States Government has made along these lines are: (1) Panama Railroad, which the Government purchased in 1904 and has since operated, and (2) the proposed federal railway in Alaska. Neither of these experiments is likely to be of any particular significance in connection with the broad question of government ownership. (For Panama Railroad, see *Poor's Manual of Railroads for 1915*, pp. 1912-13, and *Annual Reports of the Panama Railway Company*. For act authorizing the President of the United States to locate, construct, and operate railroads in the Territory of Alaska, approved March 12 1914, see *Public Laws of the United States of America*, no. 69, 63d Congress, 38 Stat. L., part 1, p. 305.)

³ *Raper, Railway Transportation*, pp. 109-10.

The extent to which government ownership of railroads prevails throughout the world is not, perhaps, fully appreciated. In Europe, out of the total mileage in 1912 of 207,295 miles, 107,663 miles, or 51.9 per cent, were state-owned.¹ Great Britain was the only important European country which had no state-owned railways. In Asia, 58 per cent of the mileage, in Africa, 59.7 per cent, and in Australasia, 93.6 per cent of the mileage was state-owned. The total mileage of the world for 1912 was 639,621 miles, of which 188,258 miles were state-owned.² This becomes even more striking when we remember that the United States alone in 1912 had 241,056 miles of road, all privately owned.

There are many strong arguments in favor of government ownership and operation of all the railways in the United States. In order to get the bearing of the whole subject on railroad credit, we will summarize the leading arguments as follows: (1) It would do away forever with the perplexing conflict between federal and state regulation; (2) it would solve the still more difficult problem of trying to prevent by regulation so-called discrimination between persons and places and yet at the same time forcing under the Sherman Act³ competition between the railroads; (3) it might lead to a comprehensive if not entirely economical use of railroads and waterways for the benefit of the whole country; (4) it would put an end to the immense railroad lobby system by which in the past attempts, too often successful, have been made to influence legislatures and courts; (5) it would lead, if properly managed, to a greater standardization of service; (6) it should result in elimination of many expenses at present necessary to the railroads, such as complete executive staffs for each railroad and solicitors whose business is simply to get freight for one railroad as against another;

¹ Out of a total mileage of 37,973 in Germany, 34,604, or 91.1 per cent, was state-owned; in France out of a total mileage of 30,668 only 5,509, or 18 per cent was state-owned.

² Figures from *London Times*, October 1, 1912, p. 15 ("The World's Railways"), and based on *Archiv für Eisenbahnwesen*, May and June, 1912, published by the Prussian Ministry of Public Works, Berlin. See also Samuel O. Dunn, *Government Ownership of Railways* (New York and London, 1915), pp. 381-84.

³ See act approved July 2, 1890, 26 Stat. L. 209, *U.S. Compiled Statutes* (1901), vol. 3, p. 3200.

(7) it might make less difficult the raising of the immense amounts of new capital which almost all railroad men agree are necessary in order that the railroads may perform adequate service; (8) it might have, if properly handled, the effect of knitting together the country still more closely than at present and of bringing the people in closer touch with the Government. Some of these objects could be attained, to be sure, without government ownership, but they all might be accomplished under that system.

Against government ownership and operation of railroads in the United States at the present time may be urged the following:

(1) Operation of the railways by the Government probably would result, as it has in Europe, in a set of rules or principles for service and rates too rigid properly to serve and develop the country; (2) allowing for the loss in taxes, it would probably result, as it has in most European countries, with the possible exception of Germany, either in a net loss or a very slight profit from operation; (3) there is no reason to suppose that it would result, any more than it has in Europe, in better freight service or in lower freight rates; (4) it would place over 1,800,000 men,¹ the present employees of the railroads, with their families, under possible political domination, a situation likely to result in injustice to the men and in danger to our system of government; (5) it would entail on the Federal Government the creation of a huge debt, the safety of which would depend to a large extent on the success with which the railroads were operated; (6) the strongly individualistic character of our people, the complicated structure of our government, and the many widely scattered large centers of wealth and population, as against the highly centralized conditions in such countries as France and Germany, would indicate less success for government ownership in this country even than in Europe; (7) until regulation has been tried thoroughly on the most intelligent and most modern lines government ownership is unnecessary.

The experience with state-operated railways in Europe and elsewhere has not been of a kind to induce the United States to enter on the experiment. The most successful state railways abroad have been the Prus-

Arguments
against
government
ownership

Results of
state operation
in Europe

¹ Interstate Commerce Commission, *Twenty-sixth Annual Report of the Statistics of Railways*, p. 23.

sian. These have been operated so as to give excellent and cheap passenger service, fair freight service, and so as to show to the Government a considerable net income above all charges. They have been managed with all the military efficiency of the Prussian Government. It is questionable whether the operation of the Prussian railways has been for the best interests of industry and commerce.¹ The state railways of Japan, with practically the lowest freight and passenger rates of any railways in existence, have been operated with distinct financial success. This has been made possible by the efficiency of the Government and by the low cost of living.² The operation of the state lines in Italy, whatever the reasons, has been so far notably unsuccessful in almost all respects.³ The operation of the state railways in Austria has not resulted in particularly low rates and it has resulted in a net loss to the Government.⁴ The Hungarian state railways usually have earned less than their interest. The same is true to a greater or less degree of the state railways in France, Russia, Belgium, Canada, Argentina, and even Germany, outside the Prussia-Hesse lines.⁵ The Swiss state-operated railways have sought to please all the people by lowering rates, increasing facilities, and raising wages. Roads which under corporate management had been making a good showing have shown under ten years of government administration a deficit.⁶ On all state operated railways, except possibly in Prussia and Japan, the tendency has been to increase the number of employees beyond all reason.⁷ It is perhaps fair to say that, with the exception of Prussia and Japan, state operation has not justified itself on economic grounds.⁸ On political grounds, it may have done so, though this always will be a matter of opinion.⁹

¹ Dunn, *Government Ownership of Railways*, pp. 130, 310-13, 325; Raper, *Railway Transportation*, pp. 143, 150, 155, 164, 303; Logan G. McPherson, *Transportation in Europe* (New York, 1910), pp. 168-69.

² Dunn, pp. 296, 313-14, 324-26.

³ Dunn, pp. 315-16; Raper, pp. 110, 119-20; McPherson, pp. 173-75.

⁴ Dunn, p. 317; Raper, p. 295; McPherson, p. 173.

⁵ Dunn, pp. 303-30.

⁶ McPherson, pp. 172, 200. For a doubt raised as to whether the Swiss state railways have shown a net profit or a net deficit, see Dunn, p. 324.

⁷ McPherson, pp. 199-200.

⁸ For another statement of financial results of government operation in Germany, France, Belgium, Holland, Switzerland, Russia, Austria-Hungary, and Italy, see McPherson, pp. 168-75.

⁹ The great war in Europe has led to military or government operation of most of the railways in the countries at war.

Regulation is not open to many of the objections that apply to government ownership. It has been in Great Britain and in the United States a natural development and one consistent with the individual initiative of the people and the democratic nature of their government. While the principles and methods of regulation to be applied have at times been in great confusion, the broad outlines to-day are becoming pretty well defined.

Regulation not open to many of the objections to government ownership

Regulation in Great Britain, where all the railways are privately owned, has been based on practical expediency. In Great Britain and Ireland, the railways are under the supervision of a commission called the Railway and Canal Commission, composed of five members, serving a term of five years: two members appointed by the Crown and three *ex-officio*. Of the appointed members one must be an expert on railway transportation. The *ex-officio* members are, in England, the Lord Chancellor; in Scotland, the Lord President of the Court of Session; and in Ireland, the Lord Chancellor of Ireland. These officials can in each case designate a judge of the highest court to serve on the Railway and Canal Commission. The Commission at work must be composed of the two appointed members and one *ex-officio*, the former to be judges of fact and the latter of law. Regulation in Great Britain has tended toward the monopoly principle and has gone on the basis of minimum interference with the operation of the railways. It has been, on the whole, fairly efficient and satisfactory.¹

Regulation in Great Britain and Ireland

In France, where nearly five sixths of the mileage is operated by private companies,² the railways are under the control of the Ministry of Public Works. Attached to this Ministry are six departments, one for each of the large systems including that operated by the State. Supervision is divided on the lines of (1) technical control; (2) commercial control; (3) financial control. There is a commercial advisory council in which two

Regulation in France

¹ Raper, pp. 52, 55, 58, 100, 212. See also Dunn, pp. 17-19.

² In France, the Government has made large advances in the cases of the privately owned railways in the form of guarantees of interest and dividends. By the end of 1958, unless present plans are changed, all the railways will be amortized and will become the property of the Government without compensation. (Raper, pp. 72-73; Dunn, pp. 20-22.)

elements are represented: (1) the Government; (2) commercial and industrial interests and the general public. French control of the railways has paid more attention to abstract justice than to practical expediency. It has represented, perhaps, the maximum of interference. Supervision has covered all important matters of operation and finance, including the approval of the issue of new securities. French control of the railways has been strong and effective, but has been too much inclined to act with rigid uniformity.¹

We have outlined the systems of regulation in Great Britain and France for the sake of the light they may throw on our own railroad problems. These two countries are the only ones of importance in Europe having a large railroad mileage under private operation. Germany, Italy, and Russia, in their machinery for the state operation of their railways, have many points of interest to any one attempting to outline a plan of exclusive federal regulation for railways in the United States.

There have been recently many suggestions, some of them based on European models, of plans for regulating the railways. There is a general agreement that the Interstate Commerce Commission, with its membership limited as at present, is physically unable to consider and solve the vast and complicated problems arising from the financing and operation of something like 250,000 miles of railroad, traversing forty-eight States, and serving a population in the neighborhood of 100,000,000. In its magnitude and in its complexity, the problem is entirely different from that of regulation of railroads in such a territory as that of Great Britain.

A possible outline for exclusive federal regulation, at least of all interstate railways, is as follows:²

- (1) Enlarging the membership of the Interstate Commerce Commission so as to include men experienced in railroad operation, traffic

¹ Raper, pp. 95 and 100; Dunn, pp. 19-24.

² See Samuel Rea, as quoted in the *Annalist* (New York), vol. 4, p. 442. E. P. Ripley, as quoted in the *Commercial and Financial Chronicle*, vol. 99, p. 1334. See also *Annalist*, vol. 4, p. 392. *Commercial and Financial Chronicle*, vol. 99, pp. 1505, 1509; Raper, *Railway Transportation*, *passim*; McPherson, *Transportation in Europe*.

and finance and also men of broad business experience. This would be thoroughly in line with the machinery used in some form or other in France, Germany, Italy, and Russia.

- (2) Making the term of office for a long period of years and the compensation sufficient to attract and retain men of the widest experience and greatest ability.
- (3) Dividing the United States into sections for railroad supervision much as the national banking system has been divided under the Federal Reserve Act. Such units as the Interstate Commerce Commission uses in reporting statistics of the railways or any other convenient units could be used. This division of territory would follow the precedents set in France, Germany, and Italy.
- (4) Compelling the railroads to give reasonably efficient service.
- (5) Allowing combination and consolidation of railroad properties where such action will lead to improved service or lower rates.
- (6) Allowing the railroads to charge rates ¹ for their services which will insure efficient and economical operation, allow reasonable provision for maintenance, depreciation, and obsolescence, and give a return to the security-holders sufficient to make possible the raising of new capital.
- (7) Having Congress refer to the Interstate Commerce Commission for investigation and report legislation concerning service, rates, wages, and other matters affecting the net income of the railways.
- (8) Limiting the power to suspend rates without a hearing to a period not over sixty days, after which, unless otherwise ordered, advanced rates shall become effective.
- (9) Supervision by the Interstate Commerce Commission when effectively organized of the issue of new securities including amounts to be issued and the purposes for which the money is to be spent.²
- (10) Publicity of accounts.

This general plan could be modified as experience showed its defects. The adoption of some such plan would increase greatly the safety of railroad bonds.

In the matter of giving the Interstate Commerce Commission or some other federal body the authority to supervise the issue of new securities, it is interest-

Wisdom of federal supervision of the issue of new securities

¹ For confirmation by the United States Supreme Court of broad supervisory power of the Interstate Commerce Commission over rates, see the so-called Inter-mountain Rate Cases, decided June 22, 1914. (United States of America, Interstate Commerce Commission *et al.*, v. Atchison, Topeka & Santa Fé Ry. Co. *et al.*, 234 U.S. 476).

² See *Twenty-eighth Annual Report, Interstate Commerce Commission*, part 1, p. 65.

ing to note that such diverse interests as Mr. James J. Hill, on the one hand, and the National Association of Railway Commissioners, on the other, agree as to the wisdom of this.¹

Regulation of rates — the only other point in this programme of regulation which we will discuss at the present time — is the crux of the whole "railroad question." In the regulation of rates the fundamental considerations are twofold: (1) The rates must be just and reasonable; (2) they must not be so low as to be confiscatory. Neither the States nor Congress itself can force a railroad company to serve the public without just compensation. What rates are reasonable and what rates give a fair return to the railroads are questions very difficult to decide.²

The basis of rate-making in the United States, before authority was given to the Interstate Commerce Commission to change rates, was to charge shippers all that the traffic would bear, in connection, of course, with whatever competition a given railroad had to meet. Since the grant of authority to the Commission over rates, there has been more of a tendency than formerly to use the cost-of-service principle as a basis for rates. This is very largely the practice on the state-owned railways in Europe. Charging what the traffic will bear usually is best adapted to developing the country, but it is likely to lead to discriminations;³ charging on the basis of the cost of the service is likely to be too rigid to allow for the proper growth and development of the country.

Very often not only what is a proper rate, but what is a possible rate has to be decided. In discussing the limits of high and low railroad rates, Mr. James J. Hill has called attention to the fol-

¹ *Highways of Progress*, p. 136. Report of the Committee on Railway Capitalization, *Proceedings of the Twenty-fifth Annual Convention of the National Association of Railway Commissioners* (Washington), pp. 212-13.

² See *Constitution of the United States*, Amendment v and Amendment xiv, sec. 1. Act February 4, 1887, Stat. L., chap. 104, sec. 1, p. 379. *U.S. Comp. Stats.* 1913, sec. 8563, and the following of the many cases dealing with this question: *Smythe v. Ames*, 169 U.S. 466; *Lake Shore & Michigan Southern Railway Co. v. Smith*, 173 U.S. 684; and *Interstate Commerce Commission v. Brimson*, 154 U.S. 447.

³ As Mr. Hill has remarked, railroad rates in a wheat country must insure the profitable raising and sale of wheat, and in a lumber country they must favor the lumber industry. This is discrimination, but it is discrimination for the purpose of developing the country. (J. J. Hill, *Highways of Progress*, pp. 256-58.)

lowing principles: (1) That the railroad must obtain a rate which, in addition to the cost of taxes and a proper allowance for maintenance and other necessary charges, will pay interest on its bonds and fair dividends on its stock; (2) that the shipper must obtain a rate that will enable him to market his products at a living profit; (3) that the ideal rate, if it can be ascertained, is one which will result in the greatest good for both parties — that is, one which will secure to the railroad the greatest volume of business and the largest net return consistent with equal benefits to the producer and shipper.¹

Limits of high
and low rates
and ideal rate

The above principles may be described as the starting-points for rate-making. The determination, however, not only of what rates are practicable from the point of view of the common prosperity of the railroads and of the whole country, but also of what rates are reasonable and compensatory, leads us to the question of railroad valuation. As is well known, there is now being undertaken, under the general supervision of the Interstate Commerce Commission, a comprehensive valuation of all the railways in the United States.² This valuation is at present in charge of Mr. C. A. Prouty, formerly of the Interstate Commerce Commission.

Federal valuation of the
railroads

In discussing the basis on which this valuation is to be made, Mr. Prouty has said that the following factors must be considered: Reproduction new; same, less depreciation, donations of cash, land, etc., by Governments, individuals, or associations; original cost of all lands and terminals and present value; all other elements of value and parts of value assignable to each State. He declares that the work will involve an accurate map and inventory of the property of every railroad engaged in interstate business as of June 30, 1914, together with other maps and plans showing all subsequent additions to the property. These inventories must be verified by the Commission with surveying parties going over every mile of road.³

Factors to be
considered in
federal
valuation

¹ *Highways of Progress*, pp. 254-55.

² Amendment approved March 1, 1913, to Interstate Commerce Act. See 62d Cong., 3d Sess., chap. 92, 37 Stat. L. 701.

³ Speech of Mr. Prouty before Chamber of Commerce of the United States, February 11, 1914, as reported in the *New York Times Annalist*, February 16, 1914, p. 196. Mr. Prouty since has estimated the total cost of ascertaining the value of all the prop-

Mr. Prouty points out the difficulties of using this valuation as conclusive in making rates. "It is impossible," he says, "to shake

Valuation not
conclusive in
making rates

a single railroad free from every other and fix its charges upon the basis of a fair return upon its fair value, as you would in case of a gas or water plant.

The rate established for one, of necessity influences and frequently absolutely determines the rate of all."¹ A rate calculated to give a return, for instance, of 6% on the value of a road advantageously situated and with a large business might mean a return of less than 6%, and sometimes very much less than 6%, on the value of other roads competing with it.

In summing up the benefits to be derived from valuation of the railways, Mr. Prouty says, "It can be known with certainty

Benefits to be
derived from
valuation
according to
Mr. Prouty

whether the general level of rates is or is not too high." He continues: "While this valuation will be of incidental benefit to the investor, while it is essential to the work of the rate-making tribunal, it seems to

me that its greatest immediate value is political. The state of the public mind toward our railways is such that this information is absolutely necessary."²

We ourselves are thorough believers in this valuation of the railways by federal authorities. While it will take undoubtedly

Summary of
valuation
question

many years and many millions of dollars to complete, and while it will not be final, or perhaps even important, in determining the rates to be charged by

any given railroad, it will, in our opinion, do these three things: (1) It will make possible at least an approximation of the value of the property on which a fair return by the railroads of the country as a whole should be earned; (2) it will clear up a great many misapprehensions and misunderstandings on the part of the public as to the fair value of railroad property compared with capitalization; (3) if government ownership ever becomes necessary, such

erties of the carriers at something over \$50,000,000, of which the railroads would spend about \$35,000,000 in preparing maps and other data. He has spoken of July, 1919, as the time when the valuation may be completed. (See *Commercial and Financial Chronicle*, vol. 99, pp. 1508-09, and *Boston News Bureau*, November 4, 1914, p. 6.)

¹ Speech before Chamber of Commerce of the United States, *New York Times Annalist*, February 16, 1914, p. 197.

² Speech of Mr. Prouty, *New York Times Annalist*, February 16, 1914, p. 197.

a valuation will, of course, be a necessary preliminary to purchase of the railroads by the Government.

In this connection the valuations of railroad property already made by certain of our States is interesting. We give here a table (on page 184) showing value compared with capitalization of railroads in the States of Michigan, Wisconsin, Minnesota, South Dakota, and Washington.¹

Valuations
of railroad
property made
by certain
States

This table shows a capitalization in the States of Minnesota and Washington very much below the estimates for the cost of reproduction and considerably below the estimates of present value; in Michigan, Wisconsin, and South Dakota, it shows a capitalization somewhat above the estimated cost of reproduction and considerably above the estimated present value.

We are of the opinion that a valuation of all the railways in the United States, if made on the basis of allowing for all proper elements of value, will prove an agreeable surprise to security-holders and to the public. There will be undoubtedly some exceptions in cases where flagrant and unjustified overcapitalization has taken place.

Federal valuation likely
to prove an
agreeable
surprise

In the early days, of course, as special inducements for raising capital to build the railways, liberal nominal issues of bonds and stocks were made compared with the amount of money received for the same. The increased value of railroad property, however, together in many cases with the drastic reorganizations of 1893 to 1898, have resulted either in bringing up present value or in reducing capitalization so that the margin between the two is very much less than it was once.

In addition to federal supervision and federal valuation of the railways, there are various reforms that perhaps can be put into practice with great advantage to the holders of railroad securities. The following points have been suggested: (1) That executive officers actually should represent the great body of stockholders and not bankers or other parties that might have motives other than the general good of the railroad; (2) that voting by proxy should be abolished in favor

Suggested
railroad
reforms

¹ These valuations are not always made up on exactly the same basis, but they will serve as a reasonably fair comparison.

RAILROAD VALUES AS COMPARED WITH CAPITALIZATIONS¹

State	Physical value			Capitalization		
	Cost of reproduction		Present value			
	Total	Per mile	Total	Per mile	Total	Per mile
Michigan, 1900	\$202,716,262	\$25,946	\$166,398,156	\$21,208	\$201,605,232	\$37,323
Wisconsin, 1909	—	—	204,933,500	24,456	357,555,907	42,857
Minnesota, 1907 ²	296,803,322	41,811	240,718,711	33,910	311,819,128	44,167
Estimate A	411,735,195	54,201	360,480,160	47,454	300,027,696	39,496
Estimate B ₁	373,820,141	49,210	322,505,107	42,403	—	—
Estimate B ₂	360,961,548	47,317	300,706,514	40,770	—	—
South Dakota, 1908	106,494,503	26,933	91,695,132	23,190	138,850,297	35,116
Washington, 1905 ³	194,957,240	64,343	175,797,025	58,288	168,096,670	53,267

¹ Bureau of Railway Economics, Serial no. 4, *A Comparative Statement of Physical Valuation and Capitalization* (Washington, D.C., 1911), p. 13. See *Second Report*, Board of State Tax Commissioners (Lansing, Michigan, 1903), pp. 52-53. *Fifth Biennial Report*, Wisconsin Tax Commission (Madison, Wis., 1911), Appendix D, Table. Supplement of the *Annual Report*, Railroad and Warehouse Commission of the State of Minnesota (Minneapolis, 1909), pp. 38 and 59. South Dakota Railroad appraisal as of June 30, 1909; *Report*, Carl C. Witt, Engineer to the Board of Railroad Commissioners of the State of South Dakota, Table III, and *Twentieth Annual Report*, Board of Railroad Commissioners (1909). *Findings of Facts by the Railroad Commission of Washington Relative to the Valuation of Railroads in the State of Washington* (Olympia, Washington, 1909), pp. 311, 314, 317; and *Railway Age Gazette*, February 18, 1910, p. 360. Interstate Commerce Commission, *Annual Reports on the Statistics of Railways in the United States*.

² In Estimate A allowance is made for the price which railways would have to pay for the land for railway purposes, including damages and monopoly prices for land. In Estimate B₁, land is valued on the same basis as land lying in contiguous territory. Estimate B₂ omits from Estimate A not only multiples on lands for right of way, yards, and terminals, but also allowance for adaptation and solidification of roadbed.

³ In Washington, a market value of \$195,662,635, or \$64,875 per mile, is also given.

of personal voting or possibly of voting directly by mail; (3) that railroad directors should direct and should receive adequate compensation for satisfactory service; (4) that at least one representative of the employees should be given a seat on the board of directors; (5) that meetings of boards of directors should be open to stockholders and to the public; (6) that minority stockholders should have a right, when they disagree with the decisions of the directors, to ask the courts to compel the corporation to pay the expenses of an appeal; (7) that railroad officials should be compelled to advertise for bids for all purchases;¹ (8) that railroad accounting should be uniform, so that every one can see how any given property is being managed compared with any other; (9) that railroad accounting should be so clear as to make impossible expenditures of money for influencing legislation without the knowledge of the public.²

In discussing in this book the lines on which, in our opinion, exclusive federal regulation of the railways may be carried out and in discussing possible reforms in railroad management, we have in mind not so much the establishment of the railways on a basis to give the best service to the country, — though from another point of view this is of paramount importance, — as we have the prevention of the recurrence of the unfortunate experiences of investors in railroad securities in the past.

Proper regulation and management of the railroads should result in better service to the country and in greater safety for investors

We have discussed many of the general and special causes of railroad receiverships. We shall try now to give a brief outline of the way in which some of our important railroad reorganizations have worked out both for the railroads and for the old security-holders.

Railroad reorganizations

In seven reorganizations between 1880 and 1889, — Atchison (two), East Tennessee, Erie, Reading (two), and Rock Island, — according to Mr. Stuart Daggett, the total amount of bonds was increased from \$651,318,271 before reorganization to \$797,570,454 after reorganization. In seven reorganizations from 1893 to 1898, — Atchison, Baltimore

Reorganizations of 1880-89 and 1893-98

¹ See in this connection section 10 of the "Clayton Act," approved October 15, 1914; 38 Stat. L., part 1, chap. 323, pp. 730, 734.

² See statement of Charles S. Mellen, as reported in the *Boston American*, May 31, 1914; also *Boston News Bureau*, June 2, 1914, p. 1.

& Ohio, Erie, Northern Pacific, Reading, Southern and Union Pacific, — the total amount of bonds was reduced from \$924,978,-070 before reorganization to \$882,574,531 after reorganization.¹ In the reorganizations before 1893, fixed charges were increased slightly from \$43,276,372 to \$43,449,306; whereas in the reorganizations of 1893 to 1898, fixed charges were reduced from \$65,984,219 to \$45,576,984, a reduction of over 30 per cent.² In the earlier period, rentals increased nearly 10 per cent; whereas in the later period, rentals decreased nearly 60 per cent.³

The reorganizations of both periods resulted in an increase in total capitalization. Those before 1893 resulted in a substantial increase in bonds, while the items of preferred and common stock remained practically stationary; the reorganizations of 1893 to 1898, on the other hand, resulted in a considerable decrease in the amount of bonds, a very large increase in preferred stock, and a substantial increase in common stock. In other words, the reorganizations before 1893 were effected principally with securities the charge on which was obligatory, whereas those from 1893 to 1898 were effected to a large extent with securities the charge on which was optional.⁴

In the reorganizations both of the earlier and of the later period, assessments were general. These assessments bore most heavily, of course, on the junior securities, particularly on the common stock. This was true to a less degree in the earlier period of reorganization than in the later.

In general, it may be said that the earlier reorganizations, as was shown by the subsequent failures of many of the same roads, were much less effective than were the later reorganizations. In the earlier period security-holders were handled too tenderly, and the necessary reductions in fixed charges were not made and often the necessary amounts of new capital not raised. In most of the later reorganizations, fixed charges were reduced sufficiently and the necessary amounts of new capital raised.

Perhaps it will be of interest to see how the holders of various securities fared in some of the reorganizations of 1893 to 1898;

¹ Daggett, *Railroad Reorganization*, p. 363.

² *Ibid.*, p. 370.

³ *Ibid.*, p. 357.

⁴ Daggett, p. 373.

in other words, to find out what the various bondholders and stockholders received for their old securities and what contribution they had to make toward new capital. The accompanying tables on pages 188-191 show new securities issued in exchange for old securities and assessments in these four reorganizations: Atchison, Topeka & Santa Fé, according to plan dated March 14, 1895; Union Pacific, according to plan dated October 15, 1895; Northern Pacific, according to plan published March 16, 1896; Baltimore & Ohio, according to plan dated June 22, 1898.

What security-holders received in four reorganizations, 1893-98

It is to be noted that in the Atchison reorganization, there was a liberal scaling-down of the principal of the debt by using to a considerable extent new preferred stock; that in the Union Pacific reorganization, the principal of the old bonds was scaled down somewhat, but the chief feature was a reduction in interest for the new bonds as well as a considerable use of preferred stock; that in the cases of the Northern Pacific and Baltimore & Ohio, the reorganizations were effected to a large extent through a reduction in interest for the new bonds as compared with the old, rather than through a reduction in principal, and that in both cases preferred stock was used to a considerable extent.

Summary of these reorganizations

One thing more needs to be noted about these reorganizations. In the three cases where the roads were reorganized after sale at foreclosure, — namely, Atchison, Union Pacific, and Northern Pacific, — the price obtained in each case at foreclosure sale was very much less than the par value of the old debt; for instance, the property and franchises of the Atchison, Topeka & Santa Fé Railroad were sold at foreclosure for \$60,000,000,¹ as against a principal of the old debt before reorganization of \$233,595,248;² the old Union Pacific Railway main line and securities involved payments of \$85,677,224, as against total debt, including debt to the United States Government, October 1, 1895, of \$111,070,224;³ the

Foreclosure price does not necessarily bear close relation to debt or to the value of the property

¹ *Commercial and Financial Chronicle*, vol. 61, p. 1063.

² *Ibid.*, vol. 60, p. 659.

³ *Annual Report Commissioner of Railroads* (Washington, 1898), p. 9; *Commercial and Financial Chronicle*, vol. 61, p. 705; vol. 65, p. 870. Of the total debt of the Union Pacific as given, \$53,039,512 represented debt to the United States Government.

ATCHISON, TOPEKA & SANTA FÉ RAILROAD COMPANY

(Old name)

Plan dated March 14, 1895¹

Old securities	Cash and new securities for each \$1000 of old securities					Assess- ments per \$1000
	Cash	New general mort- gage 4% bonds	New income 4% bonds (adjust- ment mortgage)	New non-cumula- tive 5% pre- ferred stock	New common stock	
General mortgage 4% bonds.....	\$10	\$750	\$400	—	—	—
Second mortgage, class A 3½ %bonds ..	—	—	—	\$1130	—	\$40
Second mortgage, class B 4 %bonds'	—	—	—	1180	—	40
Income bonds of 1889.....	—	—	—	1130	—	40
Capital stock.....	—	—	—	100	1000	100

Apparently \$1,500,000 Chicago & St. Louis Railroad first mortgage 6% bonds were left undisturbed. The plan says: "These bonds being well secured and having a comparatively long time to run, it is proposed to leave undisturbed."

The joint executive committee of the reorganization was left to arrange for the settlement of the old Atchison guarantee fund 6% notes, Atchison 5% equipment bonds, series A, and car-trust obligations, with new general mortgage or put like bonds in such way as seemed best to the committee. Prior like 4% bonds were to be prior to the general 4% bonds on the same property.

¹ *Commercial and Financial Chronicle*, vol. 60, pp. 658-61.

UNION PACIFIC RAILWAY COMPANY

(Old name, Kansas Pacific Division included)

Plan dated October 15, 1895¹

Old securities	New securities for each \$1000 of old securities			Assessments per \$1000
	New 4% land grant 50-year gold bonds	New non-cumulative 4% preferred stock	New common stock	
<i>Union branch</i>	\$1000 Paid in cash	\$500 Paid in cash	Paid in cash	
First mortgage 6% bonds	\$750 ^a	\$1000 ^a		
Land grant 7% bonds	1000	500		
Sinking fund 8% bonds	1000	250		
Omaha Bridge 8% bonds				
Omaha Bridge renewal 5% bonds				
Collateral trust 6% bonds				
Collateral trust 5% bonds				
Collateral trust 4½% bonds				
Equipment trust 5% bonds				
Collateral trust 6% notes				
<i>Kansas Division, Cheyenne Division and Leavenworth Branch</i>				
Eastern Division 6% bonds	\$1000	500		
Middle Division 6% bonds	1000	500		
Denver Extension 6% bonds	1000	500		
Kansas Pacific, consolidated first mortgage 6% bonds	500 ^a	1100 ^a		
Defaulted interest on same		250		
Kansas Pacific income 7% bonds	800	500		
Kansas Pacific income subordinate 7% bonds	800	500		
Kansas division, and collateral mortgage 5% bonds	800	500		
Denver Pacific first mortgage 7% bonds	800	500		
Leavenworth Branch first mortgage 7% bonds	800	500		
Indebtedness to Government, \$33,539,512 principal, \$19,500,000 interest	Paid in full ^b	150	\$1000	\$150
Capital stock				

In addition to the above exchange of securities, \$13,000,000 new 50-year 4% bonds and \$7,000,000 4% preferred stock were reserved to dispose of equipment obligations and for reorganization and corporate uses, and \$6,000,000 new preferred stock was reserved as compensation to the reorganization syndicate and bankers.

¹ *Commercial and Financial Chronicle*, vol. 61, pp. 705-07.

^a Daggett, *Railroad Reorganizations*, p. 253.

^b *Ibid.*, p. 256.

NORTHERN PACIFIC RAILROAD COMPANY

(Old name)

Plan published March 16, 1896¹

Old securities	Cash and new securities for each \$1000 of old securities					Assess- ments per \$1000
	Cash	New prior lien 4% gold bonds	New general lien 3% bonds	New preferred stock trust cer- tificates 4% non-cumulative	New common stock trust certificates	
General first mortgage 6% bonds.....	\$30	\$1350	—	—		
General second mortgage 6% bonds.....	40	1185	—	\$500		
General third mortgage 6% bonds.....	30	—	\$1185	500		
Consolidated mortgage 5% bonds.....	15	—	665	625		
Collateral trust 6% bonds.....	30	1000	—	200		
Dividend certificates.....	30	—	1180	500		
Preferred stock.....	—	—	—	500	\$500	\$100
Common stock.....	—	—	—	—	1000	150

The old branch road bonds were settled separately. To take care of these there were reserved general lien 3% bonds and preferred stock trust certificates. (As to what these old bondholders received see Daggett, *Railroad Reorganization*, p. 366.) Certain issues were left undistributed and assumed by the new company. The shares of the Northwest Equipment Company deposited under the plan were to be purchased at par flat, as of June 1, 1896.

¹ *Commercial and Financial Chronicle*, vol. 62, pp. 530-53.

BALTIMORE & OHIO RAILROAD COMPANY

(Old name)

Plan published June 22, 1898¹

Old securities	Cash and new securities for each \$1000 of old securities					Assessments per \$1000
	Cash	Prior lien 3½% bonds	Fixed mortgage 4% bonds	Preferred stock trust certificates	Common stock trust certificates	
Baltimore & Ohio loan of 1853 extended 4% bonds.....	—	\$1035	\$125	\$140		
Baltimore & Ohio consolidated mortgage of 1887 5% ² bonds.....	\$90.83	1050	125	85		
Baltimore & Ohio sterling loan of 1872 6% bonds.....	10.47	1080	120	40		
Baltimore & Ohio sterling loan of 1874 6% bonds.....	9.73	1080	120	100		
Baltimore & Ohio Parkersburg Branch, 6% bonds.....	15.00	1050	125	—		
Pittsburg & Connellsville first mortgage 4% bonds.....	20.00	1035	125	40		
Unextended 7% bonds.....	35.00	1000	125	—		
Pittsburg & Connellsville consolidated 6% bonds.....	50.20	1025	120	200		
Baltimore & Ohio loan of 1885 5% bonds.....	20.83	1000	125	100		
Chicago Division 5% bonds.....	4.06	100	1070	100		
Philadelphia Division 4½% bonds.....	10.95	—	1000	265		
Baltimore & Ohio terminal bonds of 1894 4½% bonds.....	3.75	—	1000	—		
Akron & Chicago Junction 5% bonds.....	8.33	—	1000	50	\$1000	
Akron & Chicago preferred stock.....	—	—	—	250	1000	\$20
Washington City & Point Lookout 6% bonds.....	—	—	—	—	750	200
Baltimore & Ohio stock — first preferred.....	—	—	—	—	1500	200
second preferred.....	—	—	—	—	1000	200
common.....	—	—	—	—	—	—

In addition to the above exchange of securities, various leased lines were left for subsequent treatment; and also apparently the Pittsburg & Western, to which no reference in the plan is made. A temporary extension of car trust obligations was made. Furthermore, the properties covered by the Baltimore Belt Line mortgage 5% bonds were to be leased at a rental equivalent to 4% on existing Belt Line 5% bonds. The new company, however, reserved the right to buy Belt Line bonds at par and accrued interest on sixty days' notice at any time within five years. If not purchased at the end of five years, the new company was to assume ultimate payment of the principal.

¹ *Commercial and Financial Chronicle*, vol. 66, pp. 1235-36.

² The syndicate agreed to purchase for cash, upon the plan being declared operative, all Baltimore and Ohio Consolidated 5% bonds of 1887 deposited, whose holders preferred cash, at 110 and interest; certificates to be presented within sixty days from June 22, 1898.

Northern Pacific Railroad and lands were bought in for \$15,938,200,¹ as against total debt of the company, June 30, 1896, of \$132,376,500.² The purpose of these figures is to show that the foreclosure price bears no necessary relation to the debt or to the value of the property. In all such cases, the bids at foreclosure are made on the basis of what bid is necessary in order to get the property and be in a position to dictate the reorganization. Minority bondholders, however, or those who do not assent to the plan of reorganization, must take in satisfaction of their old claim a *pro rata* of the foreclosure price; that is, if properties are sold for \$60,000,000, for instance, which have bonds outstanding of \$120,000,000, the non-assenting bondholders receive only fifty cents on the dollar less expenses. On the other hand, if they go into the reorganization, they get the new securities as arranged for by the plan.

In reorganizations the apportionment of new securities usually is on the basis of the degree of safety of the old securities, and also

Factors determining the apportionment of new securities

very largely on the basis of what class of new security-holders furnish the bulk of the new money necessary to put the property into satisfactory condition. In other words, if interests representing the old common stock furnish most of the new money, the old common stock gets better treatment than it otherwise would. Just as the old common stockholders probably have suffered most through the difficulties of their road, so in a successful reorganization, if they pay their assessments, they are placed in a position to profit most.³

As has been stated earlier in this chapter, many underlying issues of bonds have not been disturbed at all in reorganizations, and have received their interest right along. Even

Later market value of securities received in certain reorganizations

bonds that were disturbed received an assortment of new securities, which if held for a reasonable time attained a market value that satisfied and usually much more than satisfied the entire claim of the old bondholders. We give herewith on page 193 a table showing the market value

¹ *Commercial and Financial Chronicle*, vol. 63, p. 189, and Daggett, p. 308.

² Interstate Commerce Commission, *Statistics of Railways* (Washington, 1897), p. 336.

³ Very often a large part of the common stock of the new company gets into the hands of bankers, who hold the stock until the road is at least on its feet. Sometimes bankers control the reorganized road through a voting trust for a certain period.

**MARKET VALUE OF NEW SECURITIES (LESS ASSESSMENTS)
RECEIVED IN REORGANIZATION IN EXCHANGE FOR
EACH \$1000 LEADING OLD SECURITIES¹**

¹ The prices for market value are taken from the *Commercial and Financial Chronicle*, vol. 72, pp. 34, 35, 36, 38, 39; vol. 85, pp. 1126, 1128, 1130, 1131; vol. 94, pp. 55, 57, 59, 60.

194 AMERICAN AND FOREIGN INVESTMENT BONDS

given. It can be seen from this table that old bondholders and even old stockholders ultimately had a chance to recoup at least a large part of their losses and sometimes came out much better than this.

In spite of the difficulties under which our railroads have been operated and all the troubles through which they have gone, railway transportation in the United States has been, on the whole, remarkably efficient. The accompanying figures for railways in the United States compared with railways in Great Britain and Ireland, France, and Germany may be of interest.

Efficiency of American railroads compared with those of Europe

AMERICAN AND EUROPEAN RAILWAYS COMPARED

Country	Capitalization per mile of line, 1912*	Miles of line per 10,000 inhabitants, 1912†	Average receipts per passenger per mile, 1912‡ (cents)	Average receipts per ton per mile, 1912§ (cents)
United States.....	\$63,535	25.93	1.987	.744
United Kingdom.....	273,360	5.13	1.750§	2.000**
France (1911).....	147,787	6.36	1.070	1.175
Germany.....	115,454	5.68	.901	1.179

* Interstate Commerce Commission, *Annual Report on the Statistics of Railways in the United States* (Washington, 1914), p. 32; Interstate Commerce Commission, *Twenty-fifth Annual Report, Railway Returns; Returns of the Capital, Traffic, Receipts, and Working Expenditures of the Railway Companies of the United Kingdom for the year 1912* (London, 1913), pp. xvii and xx; *Statistical Abstract for the Principal and Other Foreign Countries* (London, 1914), pp. 387, 390.

† Interstate Commerce Commission, *Statistics of Railways in the United States* (1914), p. 11; *Railway Returns of the United Kingdom*, p. xvii; *Statistical Abstract for the Principal and Other Foreign Countries* (1914), pp. 13, 387, 390, 407.

‡ Interstate Commerce Commission, *Statistics of Railways in the United States* (1914), p. 42; *Statistical Abstract for the Principal and Other Foreign Countries* (1914), pp. 387, 390.

§ Approximate. See Dunn, *Government Ownership of Railways*, p. 291.

** Approximate. Includes collection and delivery. Raper, *Railway Transportation*, p. 242. Dunn, p. 291, gives the same figure. See also *Annual Railway Reports*, French Ministry of Public Works, and *Archiv für Eisenbahnwesen*. See also Bureau of Railway Economics, *Comparative Railway Statistics United States and Foreign Countries* (1912), consecutive no. 83 (Washington D.C., 1913).

A glance at the figures in the above table shows that the railways of the United States have by far a smaller capitalization per mile of line than the railways of the United Kingdom, France, or Germany.¹ They receive, with the possible exception of the railways in Great Britain,² a larger average fare per passenger

¹ The cost of construction in densely populated Europe is, of course, far greater.

² Actual average passenger rates not known.

per mile. This is owing partly to the use of second-class and third-class service to a great extent in Europe. For freight service, however, the railways of the United States receive a rate per ton per mile not much over one third that received by the railways of Great Britain and Ireland and not quite two thirds that received by the railways of France and Germany. Furthermore, wages on the American railways have been substantially higher than anywhere in Europe.¹

In discussing various phases of the railroad situation, we have strayed, perhaps, somewhat from our special subject of railroad bonds. We believe, however, that all the questions discussed above have a more or less direct and important bearing on the safety of such bonds.

All questions discussed above have bearing on safety of railroad bonds

In general, railroad bonds are dependent for their safety mainly on the relation of the total debt to the value of the property and on the relation of net earnings to fixed charges.

Leading factors of safety

The territory served by any given road, the density of the freight and passenger business, and the future growth of the territory, as well as the physical condition and operating efficiency of the road and its ability to withstand competition or proper regulation, all are highly important.²

Other factors

A first-mortgage bond on a first-class road is, as a rule, the best kind of security obtainable. Such an issue is the Chicago, Burlington & Quincy Railroad (Illinois Division) $3\frac{1}{2}\%$ and 4% issue, due July 1, 1949. These bonds are the obligation of a company which has never defaulted on principal or interest of any of its obligations, and which has paid good dividends through a long series of years, including some of the most serious depressions ever experienced in this country. The bonds are part of what is now a closed first mortgage on the valuable terminal property of the company in the city of Chicago, on practically all the mileage in the State of Illinois, and on the line running from Chicago to St. Paul, Minnesota.

Examples of strong railroad bonds

¹ Raper, *Railway Transportation*, p. 190.

² If the bonds are secured on a portion of the road, the question always should be considered as to whether this piece of road could be operated successfully as an independent property.

196 AMERICAN AND FOREIGN INVESTMENT BONDS

They are followed by \$64,247,000 general mortgage 4% bonds and by \$215,227,000 "joint" bonds issued against the stock of the company. Other especially strong mortgage issues are New York Central & Hudson River Railroad 3½%, 1907; Pennsylvania Railroad 4%, 1943 and 1948, and 4½%, 1960; Lake Shore & Michigan Southern Railway 3½%, 1907; Chicago, Milwaukee & St. Paul Railway general mortgage 3½%, 4%, 4½%, 1989; Chicago & Northwestern Railway general mortgage 4% and 5%, 1987; and Illinois Central main line 4%, 1951. Many other exceedingly well-secured issues could be given in a longer list.

In the matter of the prices of railroad bonds, we find, in comparing the prices of 1902, for instance, with those of 1912, a decline in price or increase in net income similar to what we have found in the cases of state and municipal bonds. The accompanying table illustrates this point.

Bonds	Prices	
	1902 *	1912 †
Atchison, Topeka & Santa Fé, general 4%, 1905	3.90%	4.04%
Baltimore & Ohio, prior lien 3½%, 1925	3.85	4.30
Chicago, Burlington & Quincy Railroad (Illinois Division), 3½%, 1949	3.43	4.15
Chicago, Milwaukee & St. Paul Railway, general 4%, 1989	3.10	4.05
Chicago & Northwestern Railway, general 3½%, 1987	3.25	4.10
Illinois Central Railroad, first mortgage, 4%, 1951	3.38	3.90
New York Central & Hudson River Railroad, 3½%, 1907	3.25	4.00
Northern Pacific Railroad, prior lien 4%, 1907	3.85	4.05
Pennsylvania Railroad first real estate 4%, 1923	3.45	3.85
Union Pacific Railroad land grant 4%, 1947	3.75	3.95

* Prices January 3, 1902. See Quotation Supplement, *Commercial and Financial Chronicle*, February 8, 1902, pp. 23, 24, 27, 28, 30; *Commercial and Financial Chronicle*, vol. 74, pp. 33-36.

† Prices January 5, 1912. See *Commercial and Financial Chronicle*, January 6, 1912, vol. 94, pp. 55-60.

The lowest average prices of railroad bonds recorded during the past fifteen years occurred in the fall of 1907 and in the summer and early autumn of 1915. As showing the effect of the war, the average price of twelve issues of railroad bonds listed on the New York Stock Exchange showed a net decline between July, 1914, and July, 1915, from 90.9 to 87.7, or 3.2 points.¹

In closing this chapter on railroad bonds, we will say that the

¹ Babson's *Desk Sheet of Tables and Charts*, July 29, 1915.

railroad industry in the United States is substantially equal in magnitude to all the manufacturing industries and is exceeded to any extent only by farming.¹ The mileage is over one third the total mileage of the world. The industry has, as stated earlier in this chapter, over 1,800,000 employees,² which, on the usual basis of figuring five in a family, involves the well-being of about 9,000,000 people. According to the figures of the Interstate Commerce Commission for the year ending June 30, 1913, the net capitalization of all the railroads in the United States is \$15,330,131,446, and the gross capitalization \$19,796,125,712.³

Magnitude
of railroad
industry

On the whole, the service which the American railroads have given to the country has been not only efficient, but absolutely necessary for the development and even the existence of the United States as one country. This service has established free communication and made possible free interchange of commodities over a vast territory, and has brought into being thickly populated communities which otherwise probably never would have come into existence. Furthermore, the railroads have performed this immense service on the basis of an exceedingly moderate capitalization compared with capitalization in other important civilized countries. They have paid higher wages to their employees and have given freight service at very much lower figures per ton per mile than the railroad systems of Europe.

Importance of
service per-
formed by
the American
railroads

This great industry certainly is entitled to receive rates which will make possible efficient service in the present and future growth to correspond with the growth of the country. It should be subject, in our opinion, to federal regulation in such a way as to safeguard the interests of the public and of investors. In the broadest sense, the general prosperity of the country and of the railroad industry are essential to the safety of railroad bonds.

Railroads
should be sub-
ject to federal
regulation but
are entitled to
rates which
will insure
good service
and a fair
return to
investors

¹ See Bureau of Railway Economics, Bulletin no. 39, *Comparison of Capital Values — Agriculture, Manufactures, and the Railways* (Washington, 1912), p. 14.

² Interstate Commerce Commission, *Twenty-sixth Annual Report, Statistics of Railways in the United States* (Washington, 1914), p. 23.

³ *Ibid.*, pp. 28 and 30.

CHAPTER VI

PUBLIC-SERVICE CORPORATION BONDS

Principal classes of public-service corporation bonds If we exclude steam-railroad bonds, which we have discussed in the previous chapter, public-service corporation bonds may be issued by the following principal classes of corporations: —

- (1) Electric railways.
- (2) Gas companies.
- (3) Electric light and power companies.
- (4) Telephone companies.¹

We will use the term "public-service corporation bonds" in the rest of this chapter as referring only to the above classes of bonds.

Public-service corporations may do various kinds of business The above classes may be subdivided; for instance, there are city street railways and interurban railways; there are gas companies which do principally a lighting business and companies which furnish gas principally for heating or cooking; there are electric light and power companies which develop their power principally from steam and others which develop their power principally from water power; and there are electric light and power companies whose principal business is that of furnishing light and others whose principal business is furnishing power to industries. There are often, moreover, corporations which do both a street-railway and an electric light and power business, or a gas business and an electric light and power business, or all three combined.²

Prices of some leading public-service corporation bonds

We give below prices on an income basis of certain

¹ Years ago there were a good many private water companies serving local communities, but most of these have since been taken over by municipalities for municipal ownership and operation.

² Of recent years, there has been a large development of the holding company as a vehicle for controlling public-service corporations, often of various kinds and sometimes located in different States. (See The North American Company, Public Service Corporation of New Jersey, The United Gas Improvement Company.)

well-known public-service corporation bonds in April to July, 1914:¹

Laclede Gas Light (St. Louis) first-mortgage 5% 1919	4.66%
New York Telephone 4½% 1939	4.68%
Detroit Edison first-mortgage 5% 1933	4.77%
Cleveland Railway 5% 1931	4.83%
Commonwealth Edison (Chicago) 5% 1943	4.86%
Seattle Electric 5% 1930	4.87%
Union Electric Light and Power (St. Louis) 5% 1932	4.88%
Southern Power 5% 1930	4.95%
Boston Elevated Railway 5% 1942	5.00%
American Telephone & Telegraph 4% 1929	5.00%
Interborough Rapid Transit (New York) 5% 1966	5.08%

These are fairly representative of the best grade of public-service corporation bonds.

A brief sketch of the origin and development of the business now done by public-service corporations may be of interest. The earliest developments in this field were in gas-lighting.

In 1792, one William Murdock lighted with gas his house and office in Cornwall, England. In 1813, gas was used to light Westminster Bridge; and in 1816, it became common in London. The first city in the United States to install a system of gas-lighting was Baltimore, in 1817. Since that time the growth of the gas business has been uninterrupted.² We give on page 200 a table showing quantity of gas made, capital, and number of employees for the gas business in the United States at periods from 1859 to 1909 inclusive. These figures show a steady growth of the gas business in the United States.

Origin and
development of
public-service
business—gas

The first street railway in the United States was built in New York City on Fourth Avenue from Prince Street to Harlem in 1832. Between that date and 1873, horse railroads were introduced into all the large American cities. After 1881, electrical construction and operation was used to a

Street and
electric railways

¹ Prices from dealers' offerings April to July, 1914, and from the Boston, New York, and Chicago Stock Exchanges as reported in the *Commercial and Financial Chronicle*, July 4, 1914, pp. 32-39.

² For above material see *Encyclopædia Britannica* (11th ed., Cambridge, England, 1910), vol. XI, p. 483; *Chambers's Encyclopædia* (London, Edinburgh, and Philadelphia, 1893), vol. 5, p. 103; *Encyclopædia Americana* (New York, 1904-05), vol. 7, "Gas Illumination, History of."

GAS COMPANIES*

<i>Date</i>	<i>Quantity of gas made (cubic feet)</i>	<i>Capital</i>	<i>Number of employees</i>
1859.....		\$28,848,726	5,730 †
1869.....		71,773,694	8,723 †
1889.....	36,519,512,000	258,771,795	12,996 †
1899.....	67,093,553,000	567,000,506	28,363 †
1904.....	112,549,979,000	725,035,204	39,972 †
1909.....	150,835,793,000	915,536,762	50,730 ‡

* *Thirteenth Census*, vol. x, p. 637.

† Average number of wage-earners only.

‡ Salaried employees and average number of wage-earners.

considerable extent, and at the close of 1888 there were nearly one hundred and fifty miles of electric line in operation.¹ The following table shows the miles of line operated, cost of construction and equipment, and number of employees for street and electric railways in the United States at periods from 1890 to 1912 inclusive. This table shows a rapid growth until 1907 and a moderate growth after that date.

STREET AND ELECTRIC RAILWAYS*

<i>Date</i>	<i>Miles of line operated</i>	<i>Cost of construction and equipment</i>	<i>Number of employees</i>
1890.....	5,783	\$389,357,289	70,764
1902.....	16,645	2,167,634,077	140,769
1907.....	25,547	3,637,668,708	221,429
1912.....	30,437	4,596,563,292	282,461

* Department of Commerce, Bureau of the Census, Bulletin 124, *Central Electric Light and Power Stations and Street and Electric Railways*, 1912 (Washington, 1914), p. 64.

The first really successful electric arc lamp was patented in 1857; and in 1858, a lamp designed by Duboscq was used to show electric light at sea from the South Foreland Light-house in England. From 1878 to 1879, electric arc lamps were used widely for lighting large rooms, streets, and spaces

¹ *Encyclopædia Americana*, vol. 14, "Street Railway Construction"; *Chambers's Encyclopædia*, vol. 4, p. 285.

out of doors. In 1879, Edison invented the first successful incandescent lamp; and from that time the growth of the incandescent electric-lighting industry has been rapid.¹ The accompanying table shows total horse power, cost of construction and equipment, and number of employees for central electric stations in 1902, 1907, and 1912, and the same data for hydro-electric stations and for central electric stations and hydro-electric stations combined in 1912.

ELECTRIC LIGHT AND POWER

<i>Date</i>	<i>Total horse power</i>	<i>Cost of construction and equipment</i>	<i>Number of employees</i>
<i>Central electric stations *</i>			
1902	1,845,048	\$504,740,352	30,326
1907	4,098,188	\$1,096,913,622	47,632
1912	7,528,648†	\$2,175,678,266†	79,335
<i>Hydro-electric stations † (Reporting water - power of 1000 horse power or more)</i>			
1912	3,179,244	\$922,954,341	17,160
<i>Total central electric stations and hydro-electric stations</i>			
1912	10,707,892	\$3,098,632,607	96,495

* Bureau of the Census, Bulletin 124, *Central Electric Light and Power Stations, etc.*, pp. 14 and 15.
† *Ibid.*, p. 21.

These tables show the importance and rapid growth of the electric industry.

Professor Alexander Graham Bell, on February 14, 1876, filed in the Patent Office specifications and drawings of the original Bell telephone. The first important test of the new Telephone invention was in a conversation carried on, October 9, 1876, by Professor Bell and Thomas A. Watson over a telegraph line between Boston, Massachusetts, and Cambridge, Massachusetts.² The table on page 202 shows number of stations

¹ *Chambers's Encyclopedia*, vol. 4, pp. 281-82; *Encyclopedia Americana*, vol. 6, "Electric Lighting."

² *Chambers's Encyclopedia*, vol. 10, p. 110; Herbert N. Casson, *The History of the Telephone* (Chicago, 1910), p. 49 and plate.

TELEPHONE BUSINESS *

<i>Date</i>	<i>Number of stations or telephones</i>	<i>Total capitalization outstanding</i>	<i>Number of employees</i>
1880.	54,319	\$14,605,787†	3,338
1890.	233,678	72,341,736	8,645
1902.	2,315,297	348,031,058	78,752
1907.	4,906,693	758,122,214	131,670
1912.	7,326,748	991,294,115	183,361

* Department of Commerce and Labor, Bureau of the Census, *Telephones, 1912* (Washington, 1915), p. 13.

† Partial figures.

or telephones, total capitalization outstanding, and number of employees for the telephone business at periods from 1880 to 1912 inclusive. These figures show a growth almost unbelievable. It is now possible to talk over the telephone from New York City to San Francisco.

The business of public-service corporations, with the possible exception of that of interurban railways and of that portion of the electric light and power business which may be called industrial power business, is similar in three leading respects: —

- (1) In being based on a franchise or privilege of some sort.
- (2) In being, as a rule, monopolistic.
- (3) In being affected to a comparatively slight extent as to earnings by general business expansion or depression.

Some of these conditions are inherent in the nature of public-service business and some are the result of comparatively recent developments.

In attempting to judge the safety of any given issue of public-service corporation bonds, one of the first considerations is the size and character of the community served. The cities in the United States having a population of 100,000 or over naturally furnish the best field, other things being equal, for the development of street-railway or retail gas and electric business. In the same way, those of our States having a large population, like Massachusetts, New York, Ohio, and Illinois, furnish the best field for the great

Points of
similarity in
different classes

Size and char-
acter of the
community
served an
important fac-
tor in safety

Bell telephone concerns. The character of the population, the extent and diversity of their interests, and their attitude toward public-service corporations, also are important.

Another leading consideration governing the safety of public-service corporation bonds, and perhaps the most important consideration of all, as in the case of steam railroads, is the relation of debt to property or assets. In Massa-

Ratio of debt
to assets is
important

chusetts, the ratio of debt to property on gas and electric light companies is not over fifty per cent,¹ that is, for every issue of bonds there must be paid in at least an equal amount of capital stock including premiums.² Street railways in Massachusetts have the right to issue bonds to an amount twenty per cent in excess of the amount of paid-in capital stock.³ Outside of Massachusetts, it is more common to find public-service corporations having a debt from seventy-five to ninety per cent of the property or asset value.

Many considerations may modify the safety or lack of safety of a debt representing a large proportion of the property value; for instance, control of the business in a valuable territory on the basis of giving good service at low rates, large net earning capacity, diversification of business, strong franchise situation, or particularly efficient management.

Factors modifying
importance of ratio
between debt
and property

As stated above, almost all public-service corporations, using the term as we have defined it in this chapter, are monopolistic in their character. There is, as a rule, only one street railway, one gas company, or one electric light and power company in a given city or community. In earlier days, when such enterprises were in their infancy and when the relation of street railways, gas companies, and electric light and power companies to the public had hardly been thought out, even in its broadest lines, there were often two or more corporations attempting to perform the same or similar service in one community. This state of affairs was paid for, as it always is, either by the community in poorer

Most public
service cor-
porations
to-day have a
monopoly in
their field

¹ In some cases, as in that of the Edison Electric Illuminating Company of Boston, the debt compared with the property value is so small as to be unimportant.

² *Acts 1914*, chap. 742, secs. 38-40.

³ *Ibid.*, chap. 671.

service or higher prices or else by security-holders in losses on their investment. Gradually consolidations took place until in most communities there was only one corporation attempting to perform the same or similar service.

As soon as it became clear to the public that duplication of facilities was not only unnecessary, but involved an absolute loss to the community or to security-holders, States and municipalities, in giving public-service corporations the right to do business, imposed conditions of a somewhat different and of a much more stringent character than before. For if corporations furnishing street-railway service, gas, electric light and power, or telephone service — essential to the every-day life of the community — were to have a monopoly of the business, they should be compelled to give satisfactory service at reasonable rates.

Recognition of monopoly principle has led to restrictions on private management

Publicly granted rights to operate public utilities usually are called franchises. All franchises come from the State, although the legislature may and often does delegate to municipal authorities the right to take final action in the procedure resulting in the creation of a franchise.¹ Indiana and California may be mentioned as examples of States where the power to grant franchises is exercised indirectly through the act of municipalities to which the State has delegated its power.² Franchises give public-service corporations the right to operate street-railway lines, gas, electric light, or telephone properties, as the case may be, and the right to use the streets, erect poles and wires, and do other things necessary to carry on the business of the corporation. Franchises generally have been held to be in the nature of contracts.³

Franchises

Franchises in earlier days sometimes contained burdensome restrictions, such as compelling corporations to pave an unusual distance outside the tracks, place an unreasonable portion of their wires in underground

Burdensome restrictions in franchises

¹ *Skaneateles W. W. Company v. Skaneateles*, 161 N.Y. 154, 165, per Parker, Ch. J.; 55 N.E. 562; 46 L.R.A. 687; (on appeal) 184 U.S. 354.

² *Acts 1905* (Indiana), p. 383, as amended by *Acts 1911*, p. 181 (*Burns's Annot. Ind. Stats.* [1914], vol. 4, sec. 8939); *Constitution of California*, art. XI, sec. 19.

³ *Minneapolis v. Minneapolis St. R. Co.*, 215 U.S. 417; 54 L. Ed. 259; *Chicago Municipal Gas Light, etc., Co. v. Lake*, 130 Ill. 42; 22 N.E. 616. For collection of authorities, see *Public Utilities*, by O. L. Pond (Indianapolis, 1913), sec. 95, note.

conduits, or charge a rate incompatible with a fair return to security-holders.

Many franchises, and until recently most franchises, have been granted for a definite term of years, running usually from twenty to fifty years. Some franchises have been considered by the corporations and some held even by the courts as perpetual.¹

Length of
franchises

Street-railway franchises and possibly gas and electric light franchises in Massachusetts² are revocable licenses, or simply rights to operate during good behavior. In Wisconsin,³ all franchises, and in Indiana,⁴ many franchises are what may be called indeterminate permits.

Revocable
licenses or
indeterminate
permits

In most States, a corporation must obtain the consent of the local authorities to the location of tracks, conduits, poles and wires, and other portions of its plant which may interfere with the public use of the streets.

Consent of local
authorities to
installation of
property

In the slow improvement of the franchise situation which has been going on for many years, irregularities and mismanagement of those in control of public-service corporations, just as in the case of steam railroads, combined with a lack of clear or of any ideas on the part of the public as to the principles involved, have led to many difficulties in bringing about even a reasonable working solution of this important problem.

Difficulties of
arriving at a
solution of the
franchise
question

In the opinion of the most enlightened public-service corporation

¹ See *Louisville v. Cumberland Valley Telephone Co.*, 224 U.S. 649 (holding the franchise of the Ohio Valley Telephone Company in the city of Louisville to be perpetual); per Lamar, J., at 664. "The earlier cases are reviewed in *Detroit St. R.R. v. Detroit*, 64 Fed. Rep. 628, 634, which was cited with approval in *Detroit v. Detroit St. R.R.*, 184 U.S. 368, 395, this court there saying that 'Where the grant to a corporation of a franchise to construct and operate its road is not, by its terms, limited and revocable, the grant is in fee.'"

² As to revocation of street-railway locations, see *Acts 1906*, chap. 463, part 3, sec. 66; *Acts 1909*, chap. 417, sec. 6; *Medford & Charlestown St. R.R. Co. v. Somerville & Middlesex R.R. Co.*, 111 Mass. 232. As to gas and electric light locations, see *Boston Electric Light Co. v. Boston Terminal Co.*, 184 Mass. 566; *Natick Gas Light Co. v. Natick*, 175 Mass. 246-52.

³ *Laws 1907*, chap. 499, as amended; see *Wis. Stats. 1911*, chap. 87, sec. 1797M-74; *Laws 1913*, chap. 610.

⁴ The Indiana law leaves the acceptance of an indeterminate permit optional with the utility and fixes a limited period within which to make the change. (*Laws of Indiana, 1913*, chap. 76, sec. 101.)

managers to-day, as well as in the opinion of publicists, the best sort of franchise is one that is fair and reasonable both to the community served and to the corporation.

As exceedingly interesting franchise arrangements of a more or less special character and yet embodying the principle of fair dealing between the community served and the corporation, we wish to call attention to the following:

- (1) The Boston Sliding Scale Act,¹ which established for a ten-year period from June 30, 1906, the relations in certain respects between the Boston Consolidated Gas Company and the community served. This act, passed after a valuation of the properties under the direction of the Massachusetts Gas and Electric Light Commissioners, provided for a standard price for gas of ninety cents per one thousand cubic feet and a standard rate of dividends on the capital stock of 7% per annum. It provided further, that for every one-cent reduction in the price of gas below the standard price, the company might increase its dividend one-fifth of 1%.²
- (2) Franchises of the Chicago City Railway Company and the Chicago Railways Company granted by an ordinance³ passed February 4, 1907, and approved at popular election April 2, 1907. These franchises fixed valuations for municipal purchase and provided for a distribution in cash of the surplus earnings on a five-cent fare basis between the city of Chicago and the companies.
- (3) Franchise of the Cleveland Railway Company granted by an ordinance⁴ passed by the City Council and approved by the Mayor, December 18, 1909, and ratified by the voters of the city

¹ *Acts 1906*, chap. 422.

² The Boston Sliding Scale Act has been followed by general legislation embodying substantially the same principles in the following States: New York, Pennsylvania, Maryland, Ohio, Wisconsin, Missouri, Idaho, Arizona, and California. New York: *Laws 1910*, chap. 480, sec. 65(4); Birdseye, etc., *Cons. Laws*, vol. 8, p. 2200, chap. 48, sec. 65(4), in effect June 14, 1910; Pennsylvania: *Laws 1913*, no. 854, art. 3, sec. 1(a), in effect January 1, 1914; Maryland: *Laws 1910*, chap. 180, sec. 314, p. 375, in effect April 5, 1910; Ohio: *Laws 1911*, p. 554, House Bill no. 325, sec. 19, in effect June 30, 1911; Wisconsin: *Laws, 1907*, chap. 499, in effect July 11, 1907; *Wisconsin Stats.* (1911), sec. 1797M-17; Missouri: *Laws 1913*, p. 603, Senate Bill no. 1, sec. 68(4), in effect April 15, 1913; Idaho: *Session Laws 1913*, chap. 61, sec. 20, in effect May 7, 1913; Arizona: *Laws 1912*, chap. 90, sec. 21, *Rev. Stats. 1913*, sec. 2297; California: *Stats. 1911*, Extra. Session, chap. 14, secs. 20-21, in effect March 23, 1912.

³ *Council Proceedings* (Chicago, Ill., 1906-07), pp. 2944-90.

⁴ Ordinance no. 16238A, entitled "An ordinance granting renewal of the street-railway grants of the Cleveland Railway Company," as amended by Ordinance no. 20890B, passed July 10, 1911.

at a referendum election, February 17, 1910. This franchise, granted after a valuation of the company's property made by a court, provided for municipal purchase under certain conditions and for a fare which would take care of operating expenses and maintenance, interest on the debt, and 6% on the valuation as represented by the capital stock.

- (4) Agreement¹ between the City of New York and the Interborough Rapid Transit Company for building the new subways. This agreement provided that the new subways should be owned by the City of New York, and operated by the company, that part of the cost of construction should be paid by the city and part by the Interborough Rapid Transit Company; and that the company should have a first claim on the earnings to an amount sufficient to insure a satisfactory return on its investment.

All these franchise arrangements show an adaptation of sound general principles to peculiar local conditions.²

The franchises granted in Chicago and in Cleveland were the result of independent negotiations between the cities and the companies. They were made effective before even the existence of any public-service commissions having jurisdiction. The Interborough Rapid Transit agreement, on the other hand, while the result of negotiations between the City of New York and the company, was made effective only through the approval of the Public-Service Commission, First District, State of New York. These facts suggest how recent is the idea of control of local public-service corporations by state commissions.

Interborough
Rapid Transit
agreement
made effective
only through
Public-Service
Commission

To-day, however, not only the franchise question in its narrowest sense, but the whole question of the relation of public-service corporations to the communities which they serve centers around regulation by state commissions. This is of the greatest impor-

¹ City of New York, by the Public-Service Commission, First District, with Interborough Rapid Transit Company, Contract no. 3, dated March 19, 1913; the City of New York, by the Public-Service Commission, First District, with Interborough Rapid Transit Company, lessee and grantee, supplementary agreement dated March 19, 1913; Public-Service Commission, First District, to Interborough Rapid Transit Company, certificate dated March 19, 1913; Public-Service Commission, First District, with Manhattan Railway Company, certificate dated March 19, 1913.

² For an interesting, but not, as it seems to us, entirely sound, franchise settlement, see new franchise ordinance of the Kansas City Railway & Light Company. This provides among other things that the city shall have five representatives on the Board of Directors. (*Commercial and Financial Chronicle*, vol. 99, p. 196.)

Relation of public service corporations to communities they serve centers around regulation by state commissions

tance to investors. The regulation of public-service corporations by state commissions affects the safety of public-service corporation bonds fundamentally. While this regulation may not always be exercised wisely, it substitutes for the more or less capricious action of private bankers in investigation and supervision the action of state commissions raised above private and local considerations. For this reason, together with the fact that the subject is comparatively new, we will discuss state regulation of public utilities at considerable length.

Among the earliest commissions approaching at all the character of the modern state public-service commissions were the New Hampshire Board of Railroad Commissioners established in 1844,¹ the Massachusetts Board of Railroad Commissioners established in 1869,² and the Massachusetts Gas Commission established in 1885.³ Some of the early commissions, such as the Massachusetts Board of Railroad Commissioners, had no power to enforce their recommendations, except the power of public opinion; whereas, others, like the Massachusetts Gas Commission, could, after a hearing, order changes in the quality and price of service and decide appeals as to the entrance of new companies into a field already served. Most of the early commissions had jurisdiction over steam railroads only.

Modern public-service commissions

The establishment on a large scale of modern public-service commissions having jurisdiction usually over all public utilities dates from 1907. New York State by an act approved June 6, 1907,⁴ established two public-service commissions; one for the counties of New York, Kings, Queens, and Richmond, and the other for the rest of the State. Wisconsin, by an act approved July 9, 1907,⁵ gave to the Railroad Commission full jurisdiction over all public utilities. To-day every State in the Union, except Delaware, Wyoming, and Utah, has state railroad or public-service commissions of one kind or another; and Massachusetts, New York, and South Carolina have each two distinct commissions.

¹ *Laws 1842-47*, chap. 128.

² *Acts 1885*, chap. 314, p. 769.

³ *Laws 1907*, chap. 499.

² *Acts 1869*, chap. 408.

⁴ *Laws 1907*, chap. 429.

We give herewith on pages 210-12 a list of present state commissions, with the date of their establishment, which have jurisdiction over street-railway, gas, electric light and power, or telephone properties. This list of public-service commissions shows how recent has been the establishment on any wide scale of state commissions for the regulation of local public utilities.

Present state commissions having jurisdiction over street-railway, gas, electric light and power, or telephone companies, with date of establishment

The leading principles of regulation followed by these commissions with many variations as to details are as follows:—

- (1) To control competition in the interests of the public served and of security-holders.
- (2) To insist on adequate and satisfactory service.
- (3) To maintain rates that are just and reasonable as based on the value and cost of the service including a fair return on a fair value of the property devoted to public use.
- (4) To supervise the issue of securities and the keeping of accounts.

Leading principles of state regulation of public-service corporations

Around these general principles has been built the modern elaborate and complicated system of state regulation of public utilities.

Owing to the great number of state commissions and to the fact that most of these have been established, as stated above, only recently, the working-out of these principles of public regulation can be seen best perhaps by discussing the state laws and some of the most recent leading decisions and reports of the Board of Gas and Electric Light Commissioners in Massachusetts; of the two Public-Service Commissions in New York State; of the Wisconsin Railroad Commission; and of the California Railroad Commission, together with a few decisions of special interest from other States.

Principal sources of material used in discussing state regulation

The question of the control of competition has come, in most cases, to mean the recognition of monopoly.¹ Recognition of monopoly is often a question of granting rights to operate. In a great many States, nowadays, including Massachusetts, New

Recognition of monopoly principle and certificates of public convenience and necessity

¹ This does not, of course, preclude competition from sources not under public control or only partially under public control — as witness the “jitneys.”

**PRESENT STATE COMMISSIONS HAVING JURISDICTION OVER
ELECTRIC RAILWAY, GAS, ELECTRIC LIGHT AND POWER,
AND TELEPHONE COMPANIES**

<i>State</i>	<i>Name of commission</i>	<i>Date of laws establishing</i>	<i>Jurisdiction *</i>
Alabama ¹	Railroad Commission of Alabama	Approved April 23, 1907	Electric railways and telephone companies
Arizona ²	Arizona Corporation Commission	Approved May 26, 1912	All public-service corporations
California ³	Railroad Commission of California	Constitutional amendment adopted October 10, 1911; act approved December 23, 1911	All public-service corporations — subject to the right of municipalities to retain, relinquish, and resume their present rights over local utilities
Colorado ⁴	Public Utilities Commission	Approved April 12, 1913	All public-service corporations
Connecticut ⁵	Public Utilities Commission	Approved July 11, 1911	All public-service corporations
Florida ⁶	Railroad Commissioners for the State of Florida	Approved May 26, 1911	Telephone companies
Georgia ⁷	Railroad Commission of Georgia	Approved August 23, 1907	All public-service corporations
Idaho ⁸	Public Utilities Commission of the State of Idaho	Approved March 13, 1913	All public-service corporations
Illinois ⁹	State Public Utilities Commission	Approved June 30, 1913	All public-service corporations
Indiana ¹⁰	Public Service Commission of Indiana	Approved March 4, 1913	All public-service corporations
Kansas ¹¹	Public Utilities Commission for the State of Kansas	Approved March 14, 1911	All public-service corporations except those owned by municipalities
Kentucky ¹²	Railroad Commission	Approved March 15, 1912, and March 19, 1912	Telephone companies — limited jurisdiction
Louisiana ¹³	Railroad Commission of Louisiana	Constitution in effect May 12, 1898	Telephone companies
Maine ¹⁴	Public Utilities Commission	Approved March 27, 1913	All public-service corporations
Maryland ¹⁵	Public Service Commission	Approved April 5, 1910	All public-service corporations

* This statement is intended to indicate the scope of the jurisdiction of the various state commissions only in so far as it affects those public-service corporations here in question, namely, electric railway, gas, electric light, power, and telephone companies. In addition, most of the state commissions have jurisdiction over steam railroads, and many have jurisdiction over municipal plants, and over private water companies, telegraph companies, express companies, irrigation companies, pipe-lines, and other miscellaneous public-service enterprises not dealt with in this chapter.

¹ *Alabama Code Civil* (1907), chap. 130, secs. 5632, 5633, 5637, 5647-49, and, in general, secs. 5632-5725.

² *Laws 1912*, chap. 90; *Rev. Stats. of Arizona* (1913), secs. 2277-2360.

³ *Constitution of California* (1879, as amended), art. xxi, secs. 20-24; *Laws 1911* (First Extraordinary Session), chaps. 14-40; see *Hemming's General Laws of California* (1914), chap. 430, p. 1533; *Stats. 1879-70*, p. 783.

⁴ *Laws 1913*, chap. 127. See also *Session Laws 1885*, p. 307.

⁵ *Public Acts 1911*, chap. 128.

⁶ *Laws 1911*, chap. 6186, no. 67, and *Laws 1911*, chap. 6187, no. 68, superseded by *Laws 1913*, chap. 6525, no. 105.

⁷ *Laws 1907*, no. 223, p. 72; *Code, 1911*, secs. 2615-70.

⁸ *Session Laws 1913*, chap. 61; approved March 13, 1913, in effect May 7, 1913.

⁹ *Laws 1913*, p. 450.

¹⁰ *Acts 1913*, chap. 76; approved March 4, 1913, in effect May 1, 1913.

¹¹ *Laws 1911*, chap. 238; approved March 14, 1911; in effect May 22, 1911.

¹² *Acts 1912*, chap. 99; approved March 15, 1912; *Acts 1912*, chap. 143; approved March 19, 1912.

¹³ *Constitution*, arts. 283-289; in effect May 12, 1898. (Wolff's *Constitution and Revised Laws*, vol. 2, p. 1004.) Additional powers, *Acts 1908*, no. 199.

¹⁴ *Laws 1913*, chap. 120; in effect, October 31, 1914.

¹⁵ *Laws 1910*, chap. 180; amended by *Laws 1912*, chap. 565.

JURISDICTION OF STATE COMMISSIONS (*continued*)

<i>State</i>	<i>Name of commission</i>	<i>Date of laws establishing</i>	<i>Jurisdiction</i>
Massachusetts ¹⁶	Board of Gas and Electric Light Commissioners	Approved July 3, 1914 (June 11, 1885)	Gas and electric companies
Michigan ¹⁷	Public Service Commission	In effect June 13, 1913 (June 15, 1869)	Street railways and telephone companies
	Michigan Railroad Commission	Approved June 2, 1909	Electric power and telephone companies, interurban electric railways
Mississippi ¹⁸	Railroad Commission	Approved November 1, 1892	Telephone companies and electric railways
Missouri ¹⁹	Public Service Commission of the State of Missouri	Approved March 17, 1908 Approved March 17, 1913	All public-service corporations
Montana ²⁰	Public Service Commission of Montana	Approved March 4, 1913	All public-service corporations
Nebraska ²¹	Nebraska State Railway Commission	Constitution amended November 26, 1906; act approved March 27, 1907	Street railways and telephone companies
Nevada ²²	State Railroad Commission "Public Service Commission"	Approved March 5, 1907, and March 23, 1911	Electric railways and telephone companies, gas, electric light and power companies
New Hampshire ²³	Public Service Commission	In effect May 15, 1911	All public-service corporations
New Jersey ²⁴	Board of Public Utility Commissioners	Approved April 21, 1911	All public-service corporations
New Mexico ²⁵	State Corporation Commission	Constitution adopted November 21, 1910	Electric railways, power, and telephone companies
New York ²⁶	Public Service Commissions	Approved June 12, 1907	All public-service corporations
	First District		Counties of New York, Kings, Queens, and Richmond
	Second District		Balance of State
North Carolina ²⁷	Corporation Commission	Approved March 6, 1899; March 14, 1901; March 11, 1907; March 11, 1913	Street railways and telephone companies, gas, electric light and power companies — except those owned by municipalities
North Dakota ²⁸	Board of Railroad Commissioners	Approved March 8, 1897, and March 3, 1911	Telephone companies
Ohio ²⁹	Public Utilities Commission of Ohio	Approved May 5, 1913 (May 31, 1911)	All public-service corporations

¹⁶ Acts 1885, chap. 314, and acts in amendment thereof. For present law see act approved July 3, 1914; Acts 1914, chap. 742; Acts 1869, chap. 408. Present board established by act in effect June 13, 1913; Acts 1913, chap. 784.

¹⁷ Public Acts 1909, no. 300, approved June 2, 1909, in effect September 1, 1909, succeeding former Railroad Commission. See also Public Acts, 1911, no. 138, as amended by Public Acts 1913, no. 206. Public Acts 1909, no. 106.

¹⁸ Mississippi Code 1906, chap. 139, secs. 4826-99; Laws 1908, chap. 80.

¹⁹ Laws 1913, p. 556.

²⁰ Laws 1913, chap. 52.

²¹ Constitution, art. 5, sec. 19a; Statutes 1907, chap. 90; Revised Statutes, 1913, secs. 6104-55.

²² Statutes 1907, chap. 44; approved March 5, 1907. See R. L. 1912, secs. 4549-85; Statutes 1911, chap. 162; R. L. 1912, secs. 4515-48; R. L. 1912, sec. 4550(2).

²³ Laws 1911, chap. 164; Public Statutes and Session Laws (Supplement, 1913), pp. 335-60.

²⁴ Laws 1911, chap. 195.

²⁵ Constitution, art. XI, secs. 7-11; adopted November 21, 1910. See also Laws 1912, chap. 78.

²⁶ Laws 1907, chap. 429; approved June 12, 1907; in effect July 1, 1907; amended by Laws 1910, chaps. 480, 673; and by Laws 1913, chaps. 344, 504, 505, 506, 597, etc. For the law as amended, see Birdseye, *Cons. Laws* (Suppl. 1910-13), pp. 2145-2245. For list of all amendments, see Laws 1913 (Extraordinary Session), Table of Laws and Codes amended or repealed, p. 72.

²⁷ Public Laws 1899, chap. 164; Public Laws 1901, chap. 679; Public Laws 1907, chaps. 469, 966; Pell's *Revisal* of 1908, secs. 1054 to 1118, as amended by Public Laws 1911, chap. 197; Public Laws 1913 (Extraordinary Session), chap. 63; Public Laws 1913, chap. 127.

²⁸ Laws 1897, chap. 115. *Compiled Laws* 1913, secs. 4708-83; also *ibid.*, secs. 579-601. See also Laws 1911, chap. 241.

²⁹ House Bill no. 582; approved May 5, 1913 (Laws 1913, p. 804), superseding Public Service Commission established by House Bill no. 325; approved May 31, 1911; in effect June 30, 1911 (Laws 1911, p. 549).

212 AMERICAN AND FOREIGN INVESTMENT BONDS

JURISDICTION OF STATE COMMISSIONS (*continued*)

<i>State</i>	<i>Name of commission</i>	<i>Date of laws establishing</i>	<i>Jurisdiction</i>
Oklahoma ³⁰	Corporation Commission	Constitution adopted 1907; act approved March 25, 1913	All public-service corporations
Oregon ³¹	Railroad Commission of Oregon	In effect November 29, 1912	All public-service corporations except those owned by municipalities
Pennsylvania ³²	Public Service Commission of the Commonwealth of Pennsylvania	Approved July 26, 1913	All public-service corporations
Rhode Island ³³	Public Utilities Commission	Approved April 17, 1912	All public-service corporations
South Carolina ³⁴	Railroad Commission	Constitution adopted December 31, 1895; act approved February 25, 1904; act in effect February 24, 1913	Interurban electric railways, power † and telephone companies
South Dakota ³⁵	Public Service Commission	Approved February 23, 1910	Gas and electric companies except in certain cities
Tennessee ³⁶	Railroad Commission	Approved March 10, 1911	Telephone companies
Vermont ³⁷	Railroad Commission	Approved April 3, 1913	Telephone companies
Virginia ³⁸	Public Service Commission	Approved January 20, 1909 (December 14, 1906)	All public-service corporations
Washington ³⁹	State Corporation Commission	Approved April 15, 1903 and March 27, 1914	All public-service corporations; limited in case of electric railways
West Virginia ⁴⁰	Public Service Commission	Approved March 18, 1911	All public-service corporations
Wisconsin ⁴¹	Public Service Commission	Passed February 21, 1913	All public-service corporations
	Railroad Commission of Wisconsin	Approved July 9, 1907	All public-service corporations

³⁰ *Constitution of 1907*, art. ix, secs. 15-35; *Session Laws 1913*, chap. 93.

³¹ *Laws 1911*, chap. 270.

³² *Laws 1913*, no. 854.

³³ *Laws 1912*, chap. 795.

³⁴ *Laws 1910*, no. 286; *Laws 1912*, no. 310; *Constitution* (adopted December 31, 1895), art. ix, sec. 14; *Laws 1898*, no. 486; *Laws 1904*, chap. 281; *Laws 1913*, no. 119. See *Civil Code 1912*, secs. 3138-64.

³⁵ *Session Laws 1911*, chap. 207.

³⁶ *Public Acts 1913*, chap. 32.

³⁷ *Laws 1908*, chap. 116; *Laws 1912*, no. 166; *Laws 1906*, no. 126.

³⁸ *Acts 1902-03-04*, chap. 147. Pollard's Code (1904), sec. 1313a; see also *ibid.*, sec. 1204a; *Acts 1914*, chap. 340.

³⁹ *Laws 1911*, chap. 117.

⁴⁰ *Acts 1913*, chap. 9.

⁴¹ *Laws 1907*, chap. 400; approved July 9, 1907; published July 11, 1907; *Laws 1907*, chap. 578; approved July 12, 1907; published July 13, 1907. See also *Laws 1907*, chaps. 454 and 614; *Laws 1911*, chap. 663. For these and other amendments see *Wisconsin Statutes* (1911), secs. 1795-1797T-12. See also *Laws 1913*, chap. 772, secs. 101-03; chaps. 63, 66, 331, 401, 453, 518, 523, 603, 621, 681, and 755.

† Jurisdiction over power companies is not clear.

York, Pennsylvania, Ohio, Wisconsin, and California,¹ these rights are granted through the issue of certificates of public convenience and necessity.²

¹ Massachusetts: *Acts 1906*, chap. 463, part 2, secs. 18, 21, 24, and 71; and part 3, sec. 7, as amended by *Acts 1909*, chap. 417, sec. 1; *Acts 1914*, chap. 742, secs. 155-60; *Acts 1914*, chap. 787, secs. 9 and 10; see also *Acts 1910*, chap. 518; *Acts 1906*, chap. 463, part 3, secs. 9 and 44; *Acts 1911*, chap. 442; *Acts 1908*, chap. 266; New York: *Laws 1910*, chap. 480, secs. 53 and 68; chap. 481, secs. 9 and 10; chap. 673, sec. 3; *N.Y. Cons. Laws*, chap. 48, secs. 53, 68, and 99 (1); Pennsylvania: *Laws 1913*, no. 854, art. 3,

² It has been remarked with some show of reason that, under modern conditions, public-service corporation franchises exist to enable bankers to sell the bonds.

Certificates of public convenience and necessity are not issued unless the commissions are convinced that the granting of additional facilities is for the public good. The commissions have taken the position that duplication of plants is paid for, in the long run, either by the public in poorer service or higher rates or by security-holders in losses on their investment. Accordingly, unless the granting of rights to do a competitive business is absolutely necessary, in the opinion of the commission, in order to obtain good service or reasonable rates, such rights are not granted.¹ In Indiana² and in Wisconsin³ even a municipality cannot compete with an existing public-service corporation without first obtaining a certificate of public convenience and necessity.⁴

Conditions
under which
certificates
of public
convenience
and necessity
are issued

Closely connected with the recognition by commissions of the

secs. 2, 3, and 5; art. 5, secs. 18 and 19; Ohio: *Laws 1911*, House Bill, no. 325, sec. 54; Wisconsin: *Laws 1913*, chap. 621; chap. 755, sec. 2 (sec. 1596, 62-64); *Laws 1907*, chap. 454, sec. 1797-39; California: *Stats. 1911*, Extra. Session, p. 18; Henning's *General Laws of California* (1914), chap. 430, act 3775, sec. 50. For laws of other States covering certificates of public convenience and necessity see Arizona: *Laws 1912*, chap. 90, sec. 50; *Rev. Stats. 1913*, *Civil Code*, sec. 2326; Colorado: *Session Laws 1913*, chap. 127, sec. 35; Connecticut: *Public Acts 1899*, chap. 158, secs. 1-4; *General Stats. 1902*, secs. 3846, 3917, 3920; Idaho: *Session Laws 1913*, chap. 61, sec. 48; Illinois: act approved June 30, 1913, sec. 55; *Laws 1913*, p. 488; Indiana: *Acts 1913*, chap. 76, secs. 97-98; Kansas: *Laws 1911*, chap. 238, sec. 31; Maine: *Rev. Stats.*, chap. 55, sec. 1, as amended by *Laws 1913*, chap. 129, secs. 27 and 28, in effect October 31, 1914; Maryland: *Laws 1910*, chap. 180, secs. 26 and 33; Michigan: *Public Acts 1913*, no. 206, sec. 9; Missouri: Senate Bill no. 1, approved March 17, 1913, secs. 53, 74, and 96; *Laws 1913*, p. 556; New Hampshire: *Laws 1911*, chap. 164, sec. 12 (a) and sec. 13 (a), as amended by *Laws 1913*, chap. 145, sec. 13; South Dakota: *Session Laws 1911*, chap. 211; Vermont: *Public Stats. 1906*, sec. 4338.

¹ *Weld v. Gas and Electric Light Comrs.*, 197 Mass. 556, 84 N.E. 101; Atty.-General v. *Haverhill Gas Light Co.*, 215 Mass. 394; Atty.-General *ex rel.* v. *Walworth L. & P. Co.*, 157 Mass. 86, 31 N.E. 482, 16 L.R.A. 398; *In re Longacre Electric Light & Power Co.*, *Public Service Com. Reports*, 1st Dist. (New York), vol. 1, p. 226, affirmed on appeal in *People ex rel.* The N.Y. Edison Co. v. *Willcox et al.*, 207 N.Y. 86 (reversing 151 N.Y. App. Div. 832); *Calumet Service Co. v. Chilton*, 148 Wis. 334, 135 N.W. 131; *State ex rel. Kenosha G. & E. Co. v. Kenosha Electric Ry. Co.*, 145 Wis. 337, 129 N.W. 600 (confirmation by State Supreme Court of monopoly principle); *Pacific G. & E. Co. v. Great Western Power Co.*, *Opinions and Orders of the Railroad Commission of California*, vol. 1, p. 203; *In re Oro Electric Corp'n. Transmission Lines*, *ibid.*, p. 253; *In re Application Oro Electric Corp'n*, *ibid.*, p. 700.

² *Acts 1913*, chap. 76, sec. 98.

³ *Laws 1907*, chap. 499, sec. 1797M-74, secs. 3 and 4.

⁴ In Massachusetts, the same result is arrived at by the statute compelling a municipality, which has voted to establish a municipal plant, to purchase at a fair value the existing plant of the local public-service corporation. (*Acts 1914*, chap. 742, sec. 100.)

monopoly principle is the power to approve consolidations. The general rule is that consolidations are permitted when in the judgment of the commissions they will result in better service or lower rates.¹

In Massachusetts, when two companies are consolidated, the capital of the new company at the time of consolidation shall not exceed in amount the sum of the separate capitals of the former companies.² In New York State, the Second District Commission recently has been permitting the purchase of one company by another at a price in excess of the original cost of the physical property, provided such excess is amortized or charged off from earnings during a reasonable period of years.³ In Wisconsin, the purchase of the property of one public-service corporation by another shall be at a price not in excess of the value, as determined by the commission.⁴

In view of the general recognition of public-service corporations as monopolies, the laws of many States, among which may be mentioned Massachusetts,⁵ Illinois,⁶ and Wisconsin,⁷ provide for possible purchase of

¹ For recent cases in consolidations see Massachusetts: Springfield-Chicopee, *Twenty-eighth Ann. Rep.*, Board of Gas and Electric Light Comrs. (1912), p. 67; New Bedford Gas Co. and New Bedford Elec. Co., *Fourth Ann. Rep.*, Board of Gas and Electric Light Comrs. (1889), p. 73; Worcester Gas Light Co. and Worcester Electric Light Co., *Sixth Ann. Rep.*, Board of Gas and Electric Light Comrs. (1891), p. 12; New York: In the Matter of the Joint Application of Rockland Light and Power Co. and Rockland Electric Co., etc., Public Service Com., 2d Dist. (New York), no. 176, decided April 28, 1914. California: In the Matter of the Application of Midland Counties Public Service Corporation, 3 Cal. R.R. Com. Dec. 598; In the Matter of the Application of Valley Gas and Fuel Co., etc., 2 Cal. R.R. Com. Dec. 589; In the Matter of the Application of Livermore Water & Power Co., etc., 2 Cal. R. R. Com. Dec. 618. See also *New York Laws 1910*, chap. 480, sec. 54, as amended by *Laws 1914*, chap. 220.

² *Acts 1914*, chap. 742, sec. 168. In view of the fact that in Massachusetts public-service corporations cannot have a total capitalization in excess of their physical value, this is equivalent to saying that companies formed through consolidations cannot have a capitalization in excess of the physical property.

³ See Public-Service Commission, New York, 2d District, *Eighth Annual Report* (1914), p. 67, and no. 176, dated April 28, 1914 (Rockland Light and Power case).

⁴ *Wisconsin Statutes* (1911), chap. 85, sec. 1753-11; *Laws 1911*, chap. 593, sec. 1753-11, as amended by *Laws 1911*, chap. 664, sec. 133.

⁵ *Acts 1914*, chap. 742, secs. 92 to 125.

⁶ *Laws 1913*, p. 455. (Senate Bill no. 538, approved June 26, 1913.)

⁷ *Laws 1907*, chap. 499, sec. 1797M-79 to 82, as amended by *Laws 1909*, chap. 213, and by *Laws 1911*, chaps. 13 and 596, and by *Laws 1913*, chap. 160.

the property of local public-service corporations by the municipalities. In our opinion, this right, whether exercised or not, should exist in all States.

As soon as the principle of monopoly is recognized, the questions of rates and service become of prime importance. We will take up first the regulation of service as established by statutes and by commission decisions and reports.

Regulation
of rates and
service

In the past, standards of service often have been prescribed by direct legislative enactment.¹ The modern tendency, however, is to give public-service commissions general authority to enforce standards of service. In Massachusetts, New York, Wisconsin, and California, as well as in many other States, the powers so granted to the commissions are fairly complete and comprehensive. The authority of the commissions in Massachusetts² to investigate and change service is especially complete. The Wisconsin³ law goes so far as to make mandatory on the commission the ascertaining and prescribing, "for each kind of public utility, suitable and convenient standard commercial units of product or service." The extent of the authority of state commissions over service shows a tendency all the time to increase.

Regulation
of service

In the matter of service there are usually three elements to be considered:—

- (1) Safety.
- (2) Extent of service.
- (3) Character of service.

Three leading
elements of
service

Any two of these elements, and sometimes all three combined, are likely to appear in a single case involving the regulation of service.

On the question of the safety of service, the statutes in a large majority of the States confer specific authority on the commissions to prescribe such regulations as may insure safety of operation.⁴ This is true in the four States,

Safety of
service

¹ Standard quality of gas fixed in Connecticut. See *Gen. Stats. 1902*, sec. 4569, and in Ohio, *General Code 1910*, secs. 9326-31.

² *Acts 1914*, chap. 742, secs. 161, 162, 163; *Acts 1913*, chap. 784, secs. 23-24.

³ *Laws 1907*, chap. 499, sec. 1797M-22 to 23.

⁴ See *Commission Regulation of Public Utilities*, New York (1913), p. 651, and following.

Massachusetts,¹ New York,² Wisconsin,³ and California,⁴ which we have taken as illustrating many of the principles in this chapter.

In the matter of the extent of the service, the general rule is that service shall be as nearly universal in extent as is practicable under the circumstances. Service in excess of the reasonable needs of a community and service inadequate to the reasonable needs of a community, both are discouraged, although the commissions naturally are inclined to approve service too elaborate rather than service at all likely to be considered inadequate.⁵

Provision is made in many States, including Massachusetts,⁶ Wisconsin,⁷ and California,⁸ for joint use of facilities or through service by two or more public-service corporations. The California Commission in a recent case⁹ ordered physical connection, through routes and joint rates, for telephone service against the objection of one of the companies.

In the matter of the character of the service, the commissions either lay down definite uniform standards, as in Wisconsin, or decide the question of service on the merits of each individual case, as in Massachusetts. To enforce a proper standard of service, the Massachusetts Commission, upon complaint, and the Wisconsin Commission upon its own initiative and as a matter of periodic practice, make, sometimes with the assist-

¹ *Acts 1906*, chap. 463, part 3, sec. 90, as amended by *Acts 1913*, chap. 357; chap. 784, secs. 23-24.

² *Laws 1910*, chap. 480, sec. 49, 2; see Birdseye, C. & G. *Consol. Laws*, Suppl. 1910-13, p. 2180; *Laws 1910*, chap. 480, sec. 66, 2; see Birdseye, C. & G., *Consol. Laws*, Suppl. 1910-13, p. 2201.

³ *Laws 1911*, chap. 297, sec. 1797-9a and 9b; *Laws 1907*, chap. 454, sec. 1797-57, as amended by *Laws 1909*, chap. 475; *Laws 1911*, chap. 590, sec. 1797-12k.

⁴ *Stats. 1911*, Extra. Sess., p. 18, as amended by *Stats. 1913*, p. 942. See Henning's *Gen. Laws of California*, vol. 5 (1914), chap. 430, sec. 42, p. 1549.

⁵ See decision of the California Railroad Commission ordering the San Joaquin Light and Power Corporation to serve certain ranchers, irrespective of whether such additional consumers will provide a return equal to that from the present patrons, provided the system as a whole is operated at a profit. (*Ranney v. San Joaquin Light and Power Co.*, 5 Cal. R.R. Com. Dec. 587.)

⁶ *Acts 1911*, chap. 487.

⁷ *Laws 1907*, chap. 499, sec. 1797M-4, as amended by *Laws 1911*, chap. 546.

⁸ *Stats. 1911*, 1st Extra. Sess., p. 18, sec. 40-41. Henning's *Gen. Laws of California* (1914), vol. 5, chap. 430, p. 1549.

⁹ *Tehama County Tel. Co. v. Pacific Tel. & Tel. Co.*, 2 Cal. R.R. Com. Decisions, 104 (1913).

ance of the public-service corporations themselves, thorough tests of the facilities and service furnished.

In all matters of service, the general principle, familiar in railroad regulation, is laid down that service shall not be discriminatory as against persons or places.¹ Furthermore, service shall be, as far as possible, free from accidents, uninterrupted and uniform.

Other principles in regulation of service

Regulation of service should be at once efficient and flexible. It is to be remembered that conditions of service in different places and at different times vary greatly. "Every State presents some peculiar conditions that deserve consideration. A prairie State which has no water-power, no cheap fuel, which is essentially an agricultural district, with few, if any, large cities, certainly differs from one with large urban centers, which abounds in natural resources and which possesses many large isolated power users."² Furthermore, the cost of the service, the commercial possibilities, and every other factor entering into each individual case should be taken into consideration.³

Regulation of service should be efficient and flexible

The interrelationship between service and rates is obvious. If the rates for street-railway, gas, electric light and power, or telephone service are too low, the character of the service is almost sure to suffer. On the other hand, if the service prescribed is elaborate and expensive, the rates charged for such service must be, other things being equal, correspondingly high.

Interrelationship of service and rates

¹ Postal Cable Telegraph Co. v. Cumberland T. & T. Co., 177 Fed. Rep. 726; Hatch v. Consumers' Co., Ltd., 17 Idaho, 204, 104 Pac. 670, 40 L.R.A. (N.S.) 263; Central Union Telephone Co. v. State *ex rel.*, 118 Ind. 194, 19 N.E. 604; Kilbourn City v. Southern Wis. Power Co., 149 Wis. 168, 135 N.W. 499; Pond, *Public Utilities* (Indianapolis, 1913), chap. XIII, secs. 208 to 229.

² L. H. Harris, *Service Regulations for Electrical Utilities in State Regulation of Public Utilities* (Philadelphia, 1914), p. 286.

³ For a few recent cases in commission regulation of service see Massachusetts: Petition of the Cambridge Board of Trade relative to service of the Boston Elevated Railway, *First Annual Report*, Public-Service Commission (1914), p. 133; Petitions of E. H. Vaughan *in re* Worcester Consolidated Street Railway, *ibid.*, p. 157; Petition of Customers v. Natick Gas Light Company, *Twenty-eighth Annual Report*, Board of Gas and Electric Light Commissioners, p. 32. New York: In the matter of Additional Cars on Brooklyn Lines, 3 P. S. C. R. (1st Dist., N.Y.), 37 and 716. California: City of San José v. Pacific Tel. & Tel. Co., 3 Cal. R.R. Com. Dec. 720 (1913). Wisconsin: Civic League *et al.* v. Beaver Dam Water Co., 10 W. R. C. R. 661.

In the matter of rates to be charged by public-service corporations, the following principles prevail: (1) Rates must be reasonable both to the customer and to the corporation, and if they cannot be reasonable to both, they must be to the customer — that is, the customer cannot be made to pay more than a fair value of the service rendered; ¹ (2) there must be a fair return on the reasonable value of the property at the time it is being used for the public.² These principles have been established by federal and state laws and confirmed by numerous decisions of the courts.³

To-day a large number of the States give the public-service commissions mandatory power over rates. The right to initiate rates is reserved almost everywhere to the utilities. In a large number of the States, however, the commissions are given authority to suspend the operation of rates fixed by utilities pending an investigation by the commissions as to their reasonableness.⁴

Provided the rates charged for service are not in excess of the value of the service to the consumers, rates for public service are based on what may be called, in the broadest sense, the cost of the service. This cost has been early defined in Massachusetts⁵ as made up of the following three factors: (1) Fair cost, meaning fair manufacturing cost of the product or service; (2) a fair return on a reasonable amount of capital; (3) such excess as will give the corporation sufficient surplus to meet extraordinary accidents and conduct its business with the highest economy. In New York State,⁶ it

Principles of
rate-making for
public service
corporations

Authority of
commissions
over rates

After value of
service, cost
of service, in
the broadest
sense, is the
basis of rates

¹ Brunswick & T. Water Dist. v. Maine Water Co., 99 Maine, 371, 59 Atl. 537 (1904); Covington & Lex. Turnpike Co. v. Sandford, 164 U.S. 578; Spring Valley Water Works v. San Francisco, 192 Fed. Rep. 137.

² Peckham, J., in Willcox v. Cons. Gas Co., 212 U.S. 19, at 41.

³ See Smyth v. Ames, 169 U.S. 466, at 546.

⁴ See *State Regulation of Public Utilities* (Philadelphia, 1914), p. 16. For commission orders changing rates see Massachusetts: Mayor of Worcester v. Worcester Electric Light Co., Board of G. & E. Lt. Comrs., *Twenty-eighth Annual Report* (1912), p. 15; New York: Fuhrmann v. Cataract Power and Conduit Co., 3 P. S. C. (2d Dist., N.Y.), p. 656 (1913); Wisconsin: City of Milwaukee v. The Milwaukee E. R. & L. Co., 10 W. R. C. R. 1 (1912); California: City of San José v. Pacific Tel. & Tel. Co., 3 Cal. R.R. Com. Dec. 720 (1913).

⁵ See petition of customers of the Springfield Gas Company for reduction in price, *Report*, Board of Gas and Electric Light Commissioners (1894), p. 6.

⁶ *Laws* 1910, chap. 480, sec. 97.

is provided by statute that in making rates due regard must be given to a reasonable average return upon the value of the property actually used in the public service and to the necessity of making reservation out of income for surplus and contingencies. In Wisconsin,¹ the Railroad Commission has laid down the following rule: that "under normal or ordinary conditions, public utilities are entitled to earnings that will cover the operating expenses, including depreciation and a fair return on the investment." The methods of determining the cost of service as a basis for rates in Massachusetts, New York, and Wisconsin have been followed, in a general way, by all the other state commissions.

The factor in the cost of service that has caused the most difficulty and the most discussion is what has been called a fair return on a reasonable amount of capital or on a reasonable value of the property devoted to public use. This question involves, (1) what is a fair rate of return; (2) what constitutes a fair value of property devoted to public use.

The rate of return on capital invested in public-service corporations is governed, in a broad way, by the rate of return on other forms of investment.² Obviously, however, the rate of return on capital invested in corporations under public protection should be less than the rate of return on capital invested in competitive or extra-hazardous undertakings. Again, the rate of return where the business is well managed should be greater than the rate of return where it is poorly managed. In general, the rate of return should be a rate that permits continued investment in old properties and induces original investment in new properties.³ No hard-and-fast rule can be laid down as to what constitutes a fair rate of return, but this rate must be determined in each individual case and after taking into consideration all the factors which bear on the problem.⁴

¹ *In re Appl. Manitowoc Gas Co.*, 3 Wis. R.R. Com. Rep. 163, at 171 (1908).

² *New Memphis Gas Light Co. v. Memphis*, 72 Fed. Rep. 952.

³ An interesting suggestion has been brought forward recently called the "variable rate of return." This plan involves increasing the rate of return in proportion to a reduction in the average selling price of the product or service and is similar to the sliding scale arrangement discussed earlier in this chapter. (See Henry I. Lea, *The Fixed Rate of Return on Utilities*, reprinted from the *Gas Record*, Chicago, November 25, 1914.)

⁴ See United States Supreme Court: *Willcox v. Consolidated Gas Co.*, 212 U.S. 19, 29 Sup. Ct. 192; 53 L. ed. 382 (1909), six per cent; New York: (1st Dist. Commission)

Determination of what is the fair value of the property devoted to public use leads to the vast and extremely complicated subject of valuation as a basis for rates. In Massachusetts and in California, among other States, the commissions may make valuations, and in Wisconsin, the commission must make valuations of the property of any and all public-service corporations.¹

There are to-day two leading theories as to the proper method of valuation as a basis for rates: (1) The so-called original-cost theory; and (2) the theory of cost of reproduction.² Some commissions base their findings almost entirely on the original-cost-theory; for example, the St. Louis Public-Service Commission.³ Other commissions⁴ have appeared at times to accept without reservation the cost-of-reproduction theory.

The best and most recent authorities, however, are disposed to follow no one theory, but to base their findings as to valuation upon all the factors which may enter into the question. In Massachusetts, owing to the fact that no public-service corporation has been able to issue capital stock except for cash or property, there has

Best modern practice favors considering all elements in determining fair value as a basis for rates
 Mayhew v. Kings County Lighting Company, 2 P. S. C. 659 (1911), 7½ per cent; Wisconsin: State Journal Printing Co. v. Madison Gas and Electric Co., 4 W. R. C. R. 501, 626-49 (1910); California: Contra Costa Water Co. v. City of Oakland, 159 Cal. 323; 113 Pac. 668 (1911); City of Palo Alto v. Palo Alto Gas Co., 2 Cal. R.R. Com. Dec. 300 (1913); Massachusetts: Haverhill Petitions, Board of Gas and Electric Light Comrs., *Twenty-eighth Annual Report*, p. 41.

¹ Massachusetts: *Acts 1913*, chap. 784, sec. 14; California: *Stats. 1911*, 1st Extra. Sess., chap. 14, secs. 47 and 70, as amended by *Stats. 1913*, chap. 339; Wisconsin: *Laws 1905*, chap. 362; *Stats. 1911*, sec. 1797-20; *Laws 1907*, chap. 499, *Stats. 1911*, secs. 1797M-5 to 1797M-7, 1797M-16, 1797M-42.

² There is another theory of valuation which has sometimes been called the cost-of-replacement theory, which considers the cost of replacing to-day, not the same property, but property which will perform the same service: there is also a "fair-exchange value," which is based largely on what the property may be expected to earn. However useful these theories may be in cases of purchase or condemnation, they are of very little use, it seems to us, in fixing a basis for rates. See Missouri Rate Cases, 230 U.S. 474, 33 Sup. Ct. 975 (1913); Public-Service Gas Co. v. Board of Public-Utility Comrs., 84 N.J. Law, 463, 87 Atl. 651 (1913); Fuhrmann v. Cataract Power and Conduit Co., 3 P. S. C. (2d Dist. N.Y.) 656 (1913).

³ See Report St. Louis Public-Service Commission, to the Municipal Assembly of St. Louis, on the Southwestern Tel. & Tel. Co. (October 14, 1913), pp. 9, 12-13.

⁴ See Report, Public-Utilities Commission (Connecticut, 1912), pp. xxvii and xxxvi.

not been developed any particular theory or system of valuation.¹ In New York State, the Second District Commission in the Buffalo Gas case² discussed various theories of valuation. After stating the objections to these theories, Chairman Stevens said: "It is a question whether any of these theories can be applied alone to a given case and produce a result of substantial equity and justice." The Wisconsin Commission in a recent case said: "The value of a plant and its business that is ultimately found to be fair and equitable under the circumstances may not agree either with the original cost or with the cost of reproduction, but in most instances it is likely to be found at some figure in the neighborhood of these costs."³ The California Commission in certain cases disallowed reproduction cost where that cost was in excess of the original cost.⁴

In another case, the California Commission laid emphasis on the importance of considering all elements of value.⁵ In ascertaining the value of the property of the Stockton Terminal & Eastern Railroad Company, the California Commission considered the following matters: (1) Organization, construction, and operation; (2) stocks and bonds; (3) revenues and expenses; (4) original cost, as defined; (5) reproduction value, as defined; (6) present value, as defined.⁶ In the case of new properties, emphasis may be laid, perhaps, on original cost; in the case of properties built many years ago, it is more difficult to determine original cost and more natural to take cost of reproduction as a guide in determining value. To sum up, the best modern practice favors considering all proper elements of value as a basis for rates. The origin and development of the business, the conditions under which the plant was constructed, the actual investment made, the present value of the plant, and any other factors having a bearing in any given case should be considered.

On the question of valuation when finally appealed to the United

¹ See Haverhill Gas Light case, *Twenty-eighth Annual Report*, Board of Gas and Electric Light Comrs., pp. 41-60.

² Buffalo Gas Co. v. City of Buffalo, 3 P. S. C. (2d Dist. N.Y.) 553, at 632 (1913).

³ City of Milwaukee v. The Milwaukee Electric Railway & Light Co., 10 W. R. C. R. 1 (1912).

⁴ San José v. The Pacific Tel. & Tel. Co., 3 Cal. R.R. Com., Dec. 720 (1913).

⁵ Re Water Rates and Service in the County of San Diego, 2 Cal. R.R. Com. Dec. 464, at 511-12 (1913).

⁶ 2 Cal. R.R. Com. Dec. 777, 779 (1913).

United States Supreme Court on valuation as a basis for rates

States Supreme Court, the court held, in *Smyth v. Ames*,¹ that "the basis of all calculations as to the reasonableness of rates to be charged by a corporation maintaining a highway under legislative sanction must be the fair value of the property being used by it for the convenience of the public. And in order to ascertain that value, the original cost of construction, the amount expended in permanent improvements, the amount and market value of its bonds and stock, the present as compared with the original cost of construction, the probable earning capacity of the property under particular rates prescribed by statute, and the sum required to meet operating expenses, are all matters for consideration, and are to be given such weight as may be just and right in each case. We do not say that there may not be other matters to be regarded in estimating the value of the property." In the *Minnesota Rate Cases*,² it held that "the ascertainment of that value is not controlled by artificial rules. It is not a matter of formulas, but there must be a reasonable judgment having its basis in a proper consideration of all relevant facts." In these latter cases, the court spoke of the cost of reproduction as an important element in determining value, but it warned against accepting results which depend on mere conjecture.

Methods of treatment of certain details of valuation

All the various details of the valuation question, we will not attempt to discuss in this chapter. We will simply consider briefly some of the most important and interesting phases. Among these may be mentioned:—

(1) Should land be valued on the same basis as other parts of the property?

(2) In estimating cost of reproduction new of plant, should present unit prices be taken or average unit prices for a series of years?

(3) In estimating cost of reproduction new, should present conditions of construction other than the present cost of material and labor be taken or should there be taken the conditions under which the plant actually was constructed?

(4) Should depreciation be deducted either from original cost or cost of reproduction new?

¹ 169 U.S. 466, at 546.

² *Hughes, J., in the Minnesota rate cases*, 230 U. S. 352, 434, 33 Sup. Ct. 729 (1913).

(5) How much should be allowed for overhead charges in construction, for development expense, for going concern value, or for franchise value?

The practice of some of the leading commissions in these matters will further illustrate their attitude toward valuation.

In valuing land for the purpose of fixing rates, commissions generally use the present value of land.¹ In New York State, the Commission for the First District has tried to avoid making the community pay rates which are higher in proportion to the growth and increase in activities of the community itself. It has treated the estimated average annual increase in the value of land of the company as income, but in this the commission has been overruled by the courts.² In California, in the Tonopah & Tide Water Railroad case, the commission has expressed the opinion that the basis of return on real property shall be even less than "the fair average market value of similar land in the vicinity, including the unearned increment."³ The general rule, however, is for state commissions to take the present value of land.

In the leading cases on this question taken to the United States Supreme Court, the theory of the present value of land as a basis for rates has been held as the proper one. In the Minnesota Rate Cases,⁴ the court allowed a value for lands equal to the fair average market value of similar land in the vicinity, but did not allow for various special costs involved in acquiring the particular land wanted.

On the question of whether in figuring cost of reproduction new, prices at the time of making the valuation or average prices for a series of years should be taken, the best opinion seems to favor the use of average unit prices for a series of, say, five years.⁵

Methods of
valuing land

United States
Supreme Court
on valuing land

Best practice
favors use of
average prices
in estimating
cost of repro-
duction new
of plant

¹ In New York (2d Dist.), *Fuhrmann v. Cataract Power & Conduit Co.*, 3 P. S. C. (2d Dist. N.Y.) 656 (1913). In Wisconsin, *Superior Commercial Club v. Superior Water, Light & Power Co.*, 11 W. R. C. R. 704 (1912). The United States Supreme Court has adopted this view. *Minnesota Rate Cases*; 230 U.S. 352, 33 Sup. Ct. 729 (1913). The St. Louis Commission has abandoned its original-cost theory, when dealing with land. (*Report*, St. Louis Public Service Commission, to the Municipal Assembly of St. Louis on the Southwestern Tel. & Tel. Co. (October 14, 1913), pp. 9-10.)

² See *Kings County Lighting Co. v. Willcox*, 156 N.Y. App. Div. 603 (1913).

³ 3 Cal. R.R. Com. Dec. 205 (1913). ⁴ 230 U.S. 352, 33 Sup. Ct. 729.

⁵ *Petition of Berlin Elec. Light Co. et al.*, 3 N.H. P. S. C. 174, 196 (1913); *City of Milwaukee v. Milwaukee Elec. Ry. & Light Co.*, 10 Wis. R. C. R. 1, 107, 108.

The use of present unit costs is likely to be unfair if the date of valuation happens to be at a time of unusually high or low prices.¹

The question of whether present or actual conditions of construction should be taken as the basis of estimating the cost of reproduction new has come up so far principally in the form of whether allowance should be made for pavement over mains. Where such pavement has not been part of the actual cost of installing property, the best practice refuses to allow anything for this item.²

As far as the position of the United States Supreme Court goes, there are certain statements of the court which seem to indicate an opinion that allowance should be made for pavement over mains. In *Willcox v. Consolidated Gas Company*,³ the question was not, however, squarely raised, and this decision is hardly to be taken as indicating the final opinion of the court on this point. Where a corporation has not been at any actual expense to pave over mains, and where it has not expected any allowance to be made for this item, — in which its expectation would be different from that in the case of land, — the commissions, it seems to us, have no good ground for allowing anything for this item in estimating value as a basis for rates.

In the matter of deducting depreciation from the value of the property upon which a public-service corporation shall be allowed to earn a fair return, the rules and decisions of the commissions and of the courts vary considerably. Generally, the commissions and courts deduct accrued depreciation from the estimated reproduction cost or from the original cost when making use of these factors in valuations

¹ For difficulties involved in the use of present unit prices, see *Buffalo Gas Co. v. City of Buffalo*, 3 P. S. C. (2d Dist. N.Y.) 553 (1913).

² New York, 1st Dist. (sustained by New York Court of Appeals): *Kings County Lighting Co., People ex rel., v. Willcox*, 210 N.Y. 479 (1914); New York, 2d Dist.: *Buffalo Gas Co. v. City of Buffalo*, 3 P. S. C. (2d Dist. N.Y.) 553 (1913); New Jersey: *In re Rates of the Public Service Gas Co.*, 1 N.J. B. P. U. C. 433 (1912); Wisconsin: *City of Milwaukee v. The Milwaukee Electric Ry. & Light Co.*, 10 W. R. C. R. 1, 116 (1912); California: *City of Palo Alto v. Palo Alto Gas Co.*, 2 Cal. R.R. Com. Dec. 300 (1913); *City of San José v. The Pacific Tel. & Tel. Company*, 3 Cal. R.R. Com. Dec. 720, 727 (1913); United States District Court: *Des Moines Gas Co. v. City of Des Moines*, 199 Fed. Rep. 204 (1912).

³ 212 U.S. 19 (1909).

for the purpose of fixing rates.¹ Where companies have created depreciation reserves invested in plant and working capital, the Wisconsin Commission, in a recent case, has deducted depreciation from cost new and added the depreciation reserves.²

It has been argued that a plant that has depreciated still may render as efficient service as when it was new,³ and that therefore no depreciation need be deducted. It has also been contended that the necessity, in the absence of a depreciation fund, for stockholders maintaining the plant prevents the investment from becoming diminished.⁴ Again, an effort has been made to distinguish between cases where proper allowance for depreciation in effect has been returned to the owners — in which cases, accrued depreciation should be deducted — and cases where sums set aside for depreciation are allowed to accumulate for the benefit of a sinking fund — in which cases no deduction for depreciation should be made.⁵

Treatment of
depreciation
under various
circumstances

Perhaps the best statement of the proper treatment of depreciation in estimating value as a basis for rates is given by the New Hampshire Public-Service Commission in the case of the Berlin Electric Light Company:⁶ "We do not hold that the full amount of depreciation should in every case be deducted from the cost of reproduction. It is merely one of the facts to be considered in making a finding of fair value. It stands in the same category as original cost of physical properties, other necessary early expenditures, present reproduction cost of physical properties, and other facts concerning which inquiry is made, all of which should be determined as accurately as possible,

Summary of
depreciation
question

¹ United States Supreme Court: *Knoxville v. Knoxville Water Co.*, 212 U.S. 1, 29 Sup. Ct. 148 (1909); *Minnesota Rate Cases*: 230 U.S. 352 (1913); New York Commission for 1st Dist., upheld on this point by the Appellate Division of the New York Supreme Court: *People ex rel. King's County Lighting Co. v. Willcox*, 156 New York App. Div. 603 (1913); see also 2 P. S. C. (1st Dist. N.Y.) 659; California: *City of Palo Alto v. Palo Alto Gas Co.*, 2 Cal. R.R. Com. Dec. 300 (1913).

² *City of Milwaukee v. Milwaukee Electric Ry. & Light Co.*, 10 W. R. C. R. 1 (1912); *Superior Commercial Club v. Duluth Street Railway Co.*, 11 W. R. C. R. 1 (1912).

³ *Edwards et al. v. The Helena Light & Ry. Co.*, *Sixth Annual Report*, Railroad Commission of Montana, p. 194 (1913).

⁴ *City of Whitewater v. Whitewater Electric Light Co.*, 6 W. R. C. R. 132, 138 (1910).

⁵ *Fuhrmann v. Cataract Power & Conduit Co.*, 3 P. S. C. (2d Dist. N.Y.) 656 (1913).

⁶ See *In re Sale of Berlin Electric Light Co.*, 3 N.H. P. S. C. 174, 194, 195.

but none of which have a uniform fixed value in each case. There may be cases where plants well conceived and well managed have suffered depreciation which in fact represents a part of the cost of developing the business to a point where a fair return can be secured. In other cases, as, for example, where adequate returns have been received to afford a fair return and to maintain a depreciation reserve, but have been entirely paid out in dividends, the entire amount may properly be deducted from present cost of reproduction in coming to the final conclusion as to the fair value. Between these two extremes the proper course will vary according to the circumstances in each case. But in every case it is desirable to determine, for the purpose of consideration, the full depreciation as accurately as possible." The whole problem of allowing for depreciation is a problem in cost accounting. The methods through which depreciation may be determined are almost numberless.

In the Knoxville Water case ¹ and in the Minnesota Rate Cases, the United States Supreme Court has held that in estimating the cost of reproduction new, the extent of existing depreciation should be shown and deducted.

In estimating value as a basis for rates, an allowance almost always is made for overhead charges. This item commonly is used to include the cost of engineering and superintendence, contractor's profit, interest during construction, legal and general expenses, company organization, taxes and insurance, expenses of promotion, and contingencies. Although there have been cases in which the necessity for any separate allowance for overhead charges has been questioned,² the general tendency is to make a fairly liberal allowance for this item. Commissions and courts vary greatly not only as to the amount to be allowed, but also as to the method of computing allowances. Wherever the actual expenditures for overhead charges can be proved from the records of the company or otherwise, they will form the basis for allowance under this head.³ The company

United States
Supreme Court
on depreciation

Allowance for
overhead
charges in esti-
mating value as
a basis for rates

¹ Knoxville v. Knoxville Water Co., 212 U.S. 1, 29 Sup. Ct. 148 (1909).

² Cedar Rapids Gas Light Co. v. Cedar Rapids, 144 Ia. 426, 120 N.W. 960 (1909), 223 U.S. 655. See also Cumberland Tel. & Tel. Co. v. City of Louisville, 187 Fed. Rep. 637, 646, 647 (1911).

³ See *Report*, St. Louis Public-Service Commission, to the Municipal Assembly of St. Louis on rates for electric light and power (February 17, 1911), p. 50.

will not be permitted, however, by means of a contract with the construction company to impose unnecessary and unreasonable overhead charges.¹ Where actual expenditures for overhead charges cannot be ascertained, — a situation which prevails in a majority of cases, — commissions resort, as a rule, to a percentage allowance upon the cost of items included in the general term “reproduction cost.” The New York Commission, First District, has allowed in one case fifteen per cent for engineering incidentals and similar items on costs where these charges properly would apply, and ten per cent for general contractor’s profit.² The Wisconsin Commission in one case has allowed on the total inventory reproduction cost five per cent for engineering and superintendence, four per cent for interest during construction, and three per cent for legal expenses, organization, casualties, omissions, and other similar items; ³ in another case, instead of allowing a total of twelve per cent for overhead charges, the Wisconsin Commission has allowed a total of fifteen per cent.⁴ The California Commission has considered as an adequate allowance for overhead charges in the case of a gas company fifteen per cent on the reproduction cost of the plant.⁵ In determining the proper amount of overhead charges, the commissions should use, as in all other questions of valuation, discretion in each individual case.

Another question to be determined in estimating value is whether any allowance should be made for going-concern value. Going-concern value in rate cases generally is considered to be equivalent to the uncompensated losses incurred in the development of the business. It is often called development expense. It should not be confused with good-will, which has no place in estimating the value of a public-service corporation under monopolistic conditions. The Massachusetts Board of Gas and Electric Light Commissioners has refused to consider going-concern value in rate cases.⁶ As a general

Allowance for
development
expense or
going-con-
cern value

¹ *In re* Application of N.Y. & North Shore Traction Co., 3 P. S. C. (1st Dist. N.Y.) 63 (1912).

² *Mayhew v. Kings County Lighting Co.*, 2 P. S. C. (1st Dist. N.Y.) 659 (1911).

³ *City of Ripon v. Ripon L. & W. Co.*, 5 W. R. C. R. 1, 13 (1910).

⁴ *City of Milwaukee v. Milwaukee Gas Light Co.*, 12 W. R. C. R. 441 (1913).

⁵ *City of Palo Alto v. Palo Alto Gas Co.*, 2 Cal. R.R. Com. Dec. 300 (1913).

⁶ See *Re Haverhill Petitions*, *Twenty-eighth Annual Report*, Gas & Electric Light Com’rs, pp. 41-50 (1912).

rule, however, commissions and courts recognize the fact that development expense or going-concern value should be reimbursed to the company either by an increase in the fair value on which the return is allowed or by an increase in income to enable amortization of early losses.¹ Sometimes commissions have refused to make any allowance for going-concern value because of the insufficiency of the evidence offered,² and sometimes on the ground that early deficits have been recouped out of subsequent profits,³ or on the fact that consciously or unconsciously the going-concern value has been included in the valuation of the physical plant.⁴ As stated above, however, the best practice favors a reasonable allowance for going-concern value.⁵

The last question to be discussed in connection with detailed methods of valuation is that of franchise value. It is provided by Franchise value statute in Wisconsin: "In determining the value of the property of a public-service corporation or any person furnishing service to the public for the purpose of this act, no franchise to be a corporation and no franchise or privilege granted to such corporation by the State or municipality shall be appraised, fixed, or considered at any greater sum or value than the sum paid therefor into the public treasury of the State or municipality granting the same."⁶ The above statute embodies the best and in fact the almost universal modern opinion as to the treatment of franchise value in rate cases. In spite of a few cases where, through failure to distinguish between rate cases and purchase

¹ See *Kings County Lighting Co. v. Willcox*, 210 N.Y. 479 (March 24, 1914); 141 N.Y. Sup. 677. *City of Palo Alto v. Palo Alto Gas Co.*, 2 Cal. R.R. Com. Dec. 300 (1913).

² See *Bachrach v. Consolidated Gas, etc., Co. Public Service Com. of Maryland Reports*, vol. IV, pp. 39-46 (1913).

³ *Union City v. Union Heat, Light and Power Company*, February 7, 1914, Indiana Public Service Commission (5 Rate Research, 69).

⁴ *Indiana Public-Service Commission* (5 Rate Research, 69). See *Des Moines Gas Co. v. City of Des Moines*, 199 Fed. Rep. 204 (1912).

⁵ See especially, for interesting discussions of this subject, and of other intangible elements which may enter into rate cases, *Fuhrmann v. Cataract Power and Conduit Co.*, 3 P. S. C. (2d Dist. N.Y.) 656; *Superior Commercial Club v. Superior Water, etc., Co.*, 10 Wis. R. C. R. 704; *City of Milwaukee v. The Milwaukee Electric Railway and Light Co.*, 10 Wis. R. C. R. 1; *City of Green Bay v. Green Bay Water Co.*, 11 Wis. R. C. R. 236.

⁶ *Laws 1911*, chap. 593, sec. 1753-15.

cases, an allowance has been made for franchise value,¹ it is now generally recognized that the value of a franchise is created, not by the company which owns it, but by the community served. Hence, it is unjust to compel the community to pay higher rates on account of a privilege conferred by the community itself.²

We have discussed above the various factors usually taken into consideration in estimating a fair value of the property upon which a fair rate of return shall be allowed. No hard-and-fast rules can be laid down. The very purpose of having state public-service commissions with discretionary powers is to make possible the determination of each case on its own merits — with due regard, of course, to certain general principles. If it were possible to make rigid rules to apply in all cases, it would be possible to embody those rules in statutes enforceable simply by the courts. Aside from its impossibility, however, a system of valuation based on rigid rules would defeat the principal purpose of regulation; that is, to give a square deal to the public and to the corporation. In the words of the Public Service Commission, Second District, New York, as expressed in the Buffalo Gas Case,³ February 4, 1913: "What is called the fixing of the value of the property in the public service for the purpose of rate-making is not a fixing of value in any proper sense of that word as it is correctly used in our language. It is a determination of what, under all the facts and circumstances of the case, is a just and equitable amount upon which the return allowed to the corporation is to be computed. If the time the determination is made happens to be at or near the time the plant is put in operation, the investment or original cost may be the predominant factor. If the time of determination is remote from the time of investment, the factor of appreciation or diminution in values arising from changes in costs of labor and materials may enter largely into the result. If

Summary of
valuation as a
basis for rates

¹ See, for example, *Consolidated Gas Co. v. City of New York*, 157 Fed. Rep. 849, 872; *Willcox v. Consolidated Gas Co.*, 212 U.S. 19, 48 (1909).

² See *Fuhrmann v. Buffalo General Electric Co.*, 3 P. S. C. (2d Dist. N.Y.) 739 (1913); *In re Haverhill Petitions*, *Twenty-eighth Annual Report*, Massachusetts Board of Gas and Electric Light Com'rs. (1912), pp. 41, 50; *Re Rates of the Public Service Gas Co.*, 1 N.J. B. P. U. C. 433 (1912); *Public Service Gas Co. v. Board of Public Utility Commissioners*, 84 N.J. 463; 87 Atl. 651 (1913); *Cedar Rapids Gas Light Co. v. City of Cedar Rapids*, 223 U.S. 655, 669 (1912).

³ *Buffalo Gas Co. v. City of Buffalo*, 3 P. S. C. (2d Dist. N.Y.) 553 (1913).

the plant is unreasonably disproportionate in size to the service required of it, the cost of reproduction new cannot be the sole test. If the actual investment has been reckless and extravagant, the owners should bear the loss and not the public. If the general scale of prices and values in the community has been increased or diminished since the plant was built, the owners may be fairly called upon to share the general diminution; and on the other hand, may justly demand a share in the general appreciation to which the existence of their property has, it may fairly be assumed, contributed at least its proportionate share." This completes what we have to say on the subject of valuation as a basis for rates.

We have discussed commission regulation of public-service corporations in the matters of monopoly, service, and rates. We will now take up briefly the policy of the commissions in the matters of capitalization and accounts.

Control of capitalization is exercised through approval or dis-approval of the issue of securities. In Massachusetts,¹ New York,² Wisconsin,³ California,⁴ and many other States, the commissions have authority to approve or disapprove the issue of bonds and stocks.

In New York State, the statutes provide, in substance, that public-service corporations may issue, when necessary, stock, bonds, notes, or other evidences of indebtedness payable at more than twelve months from the date of issue: —

- (1) For the acquisition of property.
- (2) For construction, completion, extension or improvement of their facilities.
- (3) For the improvement or maintenance of their service.
- (4) For the discharge or lawful refunding of their obligations or

¹ *Acts 1906*, chap. 463, part 3, secs. 103, 104, 107, 108, 109, 111; *Acts 1908*, chap. 636; *Acts 1909*, chap. 485; *Acts 1910*, chap. 536; *Acts 1913*, chap. 784, secs. 15 and 16; *Acts 1913*, chap. 764; *Acts 1914*, chap. 742, secs. 35, 38, 39, 40, 41, 42, 43, 44; *Acts 1914*, chap. 671. See Fall River Gas Works Co. v. Board of Gas and Electric Light Com'rs. 214 Mass. 529 (1913).

² *Laws 1910*, chap. 480, secs. 55, 60, 101 (as amended by *Laws 1910*, chap. 673). See also *Laws 1912*, chap. 289; *Laws 1914*, chap. 220.

³ *Stats. 1911*, chap. 85, sec. 1753 as amended by *Laws 1913*, chap. 598 and chap. 773, sec. 70.

⁴ *Stats. 1911*, Extra. Sess., p. 18, as amended by *Stats. 1913*, chaps. 339 and 553; Henning's *Gen. Laws of California* (1914), vol. 5, p. 1558, act 3775, sec. 52.

for the reimbursement of moneys actually expended from income or from other moneys not obtained from the issue of securities.

The order of the commission authorizing such issue shall state the amount of securities and the purposes to which the securities or the proceeds are to be applied; that the money, property, or labor to be procured or paid for by the issue of such securities is or has been, in the opinion of the commission, reasonably required for the purposes specified in the order; and that such purposes are not, in whole or in part, reasonably chargeable to operating expenses or to income. The commission is forbidden to allow the capitalization of franchises beyond the actual amount paid therefor to the State or to any subdivision thereof. The commission cannot approve capitalization of a corporation formed by merger to an amount in excess of the combined capitalization of the companies merged,¹ nor can it approve the capitalization of any contract for consolidation or lease. For the issue of notes and similar obligations, payable in less than one year, the consent of the commission is unnecessary.² These provisions are typical of the best practice in the States where the commissions have authority over the issue of securities.

Approval of securities in New York State as an example of the best practice

Many people have held that if service and rates are regulated, there is no necessity for regulating the issue of securities. This reasoning does not take into account the interests of investors. In the words of Dr. Maltbie, of the New York Public-Service Commission, First District: "The State owes a duty towards investors as well as it does towards shippers and passengers. Further, proper regulation of securities will ultimately affect rates and service. It may not immediately, but in the long run better service and lower rates will be given by corporations that are upon a sound financial basis than by those having a great overcapitalization and unsound financing."³ Undoubtedly it is true that overcapitalization has a tend-

Wisdom of commission control of the issue of securities

¹ See, however, Rockland Light and Power Case, cited on page 214, note 3.

² As an illustration of the practical working of these provisions see: In the Matter of the Application of the New York and Ontario Power Co., 1 P. S. C. R. (2d Dist. N.Y.) 453 (1909); *People ex rel. Binghamton L. H. & P. Co. v. Stevens*, 203 N.Y. 7 (1911).

³ Quoted by J. M. Eshleman in "Should the Public Utilities Commission have Power to Control the Issuance of Securities," *State Regulation of Public Utilities*, p. 160.



ency to lead either to poorer service or to higher rates. Even where the commissions have full authority over service and rates, it is much more difficult for them to make this control effective, if they are dealing with a corporation attempting to earn an attractive return on an excessive amount of securities. The strongest argument, however, for the control of the issue of securities by commissions is the protection of investors.¹

The only other important phase of regulation of public-service corporations by state commissions is the supervision of accounts and the ordering of reports. There are provisions for the regulation of accounts in upwards of one half the States. Usually the commission has authority to establish a system of uniform accounts. In Indiana, the commission must prescribe accounting practices.² In many States provision is made for special depreciation accounts. In practically all the States the public-service corporations must make regular periodic reports to the commissions.

It is to be remembered that all orders of the commissions in the various States are subject to a greater or less degree of review by the courts. In Colorado³ and in California,⁴ by statute, the findings and conclusions of the commissions on questions of fact are made final and are not subject to judicial review. In several other States the limits within which judicial decisions may operate are laid down by statute. In Rhode Island,⁵ Connecticut,⁶ California,⁷ and several other States, orders of the commission may be suspended pending review by the court. "The right of appeal and judicial review is statutory and therefore subject to the will of the legislature within the constitutional limitations of due process and equal protection of the law with respect

¹ Aside from the direct power of commissions to approve or disapprove the issue of new securities, there is a form of control which consists simply in making public the facts about the issue of new securities and the purposes for which they are issued. This is the method in the main recommended by the Railroad Securities Commission appointed by President Taft in 1910.

² *Acts 1913*, chap. 76, secs. 15-17.

³ *Colorado, Session Laws, 1913*, chap. 127, sec. 52.

⁴ *Stats. 1911*, 1st Extra. Session, chap. 14, sec. 67; Henning's *General Laws of California* (1914), act 3775, sec. 67, p. 1566.

⁵ *Laws 1912*, chap. 795, sec. 35.

⁶ *Public Acts 1911*, chap. 128, sec. 33.

⁷ *Laws 1911*, Extra. Session, chap. 14, sec. 68; Henning's *General Laws of California* (1914), act 3775, sec. 68, p. 1566.

to the preservation of property and contract rights.”¹ This finishes what we have to say on the regulation of public-service corporations by state commissions.

There has been recently a considerable movement in some places in favor of regulation by the local communities instead of by the State.² There have been advanced three arguments: State vs. local regulation
(1) That the local community is better able to judge of its own needs than is the State; (2) that local self-sufficiency or home-rule should not be weakened; (3) that local, instead of state, control will make easier purchase and operation of a public-service corporation by the municipality. In Los Angeles, California, under the combined authority of the City Council and the local Board of Public Utilities, there has been worked out a reasonably satisfactory system of local regulation.³ In view of the fact that so many public-service corporations operate in more than one municipality, local regulation, it seems to us, is likely to lead to the same conflict between different municipalities and between municipalities and the State as prevails in the case of steam railroads between the different States and between States and the Federal Government. Local regulation, moreover, is liable to be too provincial. Exclusive and more or less uniform regulation⁴ of local public utilities by the State seems to us, on the whole, the best solution.

¹ Oscar L. Pond, *Methods of Judicial Review in Relation to Effectiveness of Commission Control in State Regulation of Public Utilities* (Philadelphia, 1914), p. 64.

² See *Report* of D. F. Wilcox, Chairman of Committee on Franchises of the National Municipal League, November 13, 1913, and *Report* of Conference of American Mayors, held in Philadelphia, November 13 and 14, 1914 (*Commercial and Financial Chronicle*, vol. 99, p. 1510).

³ See *State Regulation of Public Utilities*, pp. 108-18.

⁴ There has been drawn up recently and submitted to a great many different interests a so-called "Uniform Utilities Bill." The main provisions of this bill are as follows: (1) State commissions to have power to prevent needless competition through control of the issue of certificates of public convenience and necessity; (2) state commissions shall control consolidation; (3) all franchises granted to public utilities which do not provide for possible purchase by the municipality shall be indeterminate; (4) municipalities shall have the right to purchase public utilities, in case of disagreement as to price, at a value to be determined by the state commissions; (5) state commissions shall enforce adequate service and shall have power to investigate service on their own motion; (6) state commissions shall have full power, subject to law, to prescribe rates; (7) they shall have supervision of the issue of new securities; (8) they shall prescribe uniform systems of accounts. (Draft Bill for the regulation of public utilities with documents relating thereto, authorized to be published by the National Civic Federation, October 23, 1914).

Related to the question of regulation of local public-service corporations is the question of municipal ownership and operation.

Municipal ownership Many of the franchises granted in recent years by municipalities to public-service corporations in the United States, as shown earlier in this chapter, provide for purchase of the property of the public utility by the municipality. In Massachusetts,¹ Illinois,² Wisconsin,³ and other States, definite provision is made in the statutes for the purchase of public-service corporations for municipal ownership and operation.

Municipal operation in Massachusetts In Massachusetts there were on June 30, 1913, thirty-six municipally owned and operated lighting plants.⁴ Of these thirty-six plants, however, seventeen were distributing plants only and bought their product. The results of municipal operation in Massachusetts have varied considerably. In many cases the community has obtained its street lighting at lower figures than otherwise obtainable, and has received a good quality of commercial service at reasonable rates. In all the municipal plants in Massachusetts the maintenance of a depreciation fund, usually three per cent, is compulsory. Any deficit incurred in the operation of the plants is made up from taxes. Owing to the almost limitless number of factors which enter into the question of the success or failure of municipal operation, it is almost impossible to say what the true results have been. There is nothing to show, however, that in most cases municipal operation has not worked out reasonably well.

Municipal ownership and operation elsewhere in the United States There has been a considerable spread of municipal ownership and operation of lighting plants outside of Massachusetts. In 1912, the total number of municipal central electric stations in the United States was 1562 as against 3659 stations privately owned and operated.⁵ When we try to arrive at the comparative results of municipal and private operation throughout the United States, we find the same

¹ *Acts 1914*, chap. 742, secs. 92 to 125.

² Senate Bill no. 538, approved June 26, 1913; *Laws 1913*, p. 455.

³ *Laws 1907*, chap. 499, secs. 1797M-74 to 1797M-86, as amended by *Laws 1909*, chap. 213, and by *Laws 1911*, chaps. 12 and 596, and by *Laws 1913*, chap. 160.

⁴ See *Twenty-ninth Annual Report*, Board of Gas and Electric Light Commissioners, pp. 209-12.

⁵ Department of Commerce, Bureau of the Census, Bulletin 124 (Washington, 1914), p. 14.

difficulties as in Massachusetts. The differences in the comparative size of the municipal and private stations, in the character of the community served, in the proportions of lighting and of power business, in the amounts charged to depreciation and in the methods of keeping accounts, make a comparison of financial results at present of very little significance. If we attempt to compare service, we will find almost always a difference of opinion. The municipal electric lighting plant in Detroit is referred to usually as a success. It has been in operation since 1895, and, except the plant in Chicago, is the largest municipal lighting plant in the United States. Detroit has secured its lighting on terms which compare favorably with the prices charged by private companies in other cities. The plant is managed by a Public Lighting Commission in much the same way as a board of directors would conduct the affairs of a well-managed private corporation.¹ The municipal electric light plants in South Norwalk, Connecticut, Allegheny, Pennsylvania, and Chicago, Illinois, all have been cited as confirming the wisdom of municipal ownership and operation.² Municipal operation of gas works in Philadelphia, on the other hand, proved a failure and was abandoned.³ The results of an investigation of the commission on public ownership and operation of the National Civic Federation, published in 1907, show that it is possible to obtain two opinions almost diametrically opposite on the questions of service, rates, and general success or failure of municipal as against private plants.

In Great Britain and Germany, there has been a much greater development of municipal ownership and operation than in the United States. In both countries the properties usually have been operated without loss (after making due allowances) and in some cases with considerable profit. Where changes have been made during the past few years from private to municipal operation, they have resulted, in most cases, in better service. The service given, however, is very much less developed than that furnished under private management in

Municipal
ownership and
operation in
Europe

¹ John Fairlie, *Essays in Municipal Administration*, New York, 1908, pp. 219-29.

² E. W. Bemis, "Municipal and Private Operation of Public Utilities," Report to the National Civic Federation, Commission on Public Ownership and Operation (New York 1907), vol. 1, part 1, pp. 165, 169, 175.

³ *Ibid.*, p. 149, and Fairlie, p. 271.

the United States.¹ Municipal operation of street railways in Great Britain, particularly in Glasgow, Scotland, and in Liverpool and Leeds, England, has proved on the whole satisfactory. It has resulted in extension of service and usually in a reduction of fares. It has also resulted favorably from a financial point of view.² It is to be remembered that municipal operation of tramways in Great Britain has been developed for the most part under fairly good political conditions. Among the well-known municipal gas plants in Great Britain may be mentioned those in Birmingham, Manchester, Leicester, and Glasgow. London has several municipal electric plants which appear to have shown a fair degree of success.³ Outside of Great Britain, we find in Vienna the largest municipal street railway system in the world and also municipal gas works; in Bologna, Leghorn, Padua, and Pisa, Italy, we find municipal gas plants.⁴ On the whole, the service furnished by these municipal utilities in Vienna and in Italy has been at least fair, although less developed than the service furnished under private operation in the United States. The rates charged have not been particularly low for the service furnished. The financial results appear to be fairly satisfactory.⁵ To sum up, perhaps it is fair to say that municipal operation of public utilities in Europe has given reasonably satisfactory results. The political conditions have been more favorable than in the United States.

Purchase and operation of public utilities by municipalities in the United States involve fewer difficulties than public ownership and operation of the steam railroads. Under our present fairly satisfactory system of state regulation of local utilities, however, municipal ownership⁶ of these properties seems even less necessary than government ownership of railroads.

Municipal ownership of public utilities more feasible but less necessary than government ownership of railroads

¹ Fairlie, p. 272.

² "Municipal and Private Operation of Public Utilities," *Report to National Civic Federation, Commission on Public Ownership and Operation* (New York, 1907), vol. 1, part 1, pp. 263 to 297. See also *Ibid.*, vol. II, part 2, "British Tramways."

³ Fairlie, p. 301.

⁴ *Ibid.*, pp. 325-28 and 341-49.

⁵ *Ibid.*, pp. 325-28 and 348-49.

⁶ For several interesting articles on municipal ownership and on the relation of the public to public-service corporations, see "Public Policies as to Municipal Utilities," in the *Annals of the American Academy of Political and Social Science*, vol. LVII, no. 146 (January, 1915).

We have confined our discussion of public-service corporations so far mostly to street railway, gas, and electric light and power companies operating in local communities. There is another large class of public-service corporations — the telephone companies. These companies do usually an interstate business. The question of the relation of these corporations to the public is a perplexing one. The telephone business is in its very nature of a peculiarly monopolistic character. We ourselves feel that the final solution will be either ownership and operation by the Federal Government or operation of the properties as a unit under a federal license or charter — with the same sort of regulation as to service, rates, and capitalization as is provided in the authority of state commissions over public-service corporations located wholly within one State.

Relation of
the telephone
companies to
the public

A recent report of the Postmaster-General of the United States¹ made the following suggestions: —

Report of the
Postmaster-
General on
telegraph and
telephone lines

- (1) That Congress declare a government monopoly over all telegraph and telephone lines and over certain other means of communication.
- (2) That Congress acquire by purchase at appraised value the commercial telephone network, except the farmer lines.
- (3) That Congress authorize the Postmaster-General to issue, in his discretion and under such regulations as he may prescribe, revocable licenses for the operation by private individuals, associations, companies, and corporations of the telegraph service and such parts of the telephone service as may not be acquired by the Government.

The report states that the United States is the only one of the leading nations which has left to private enterprise the ownership and operation of telegraph and telephone facilities.

It is undeniable that the telephone business comes as near to what may be called a legitimate government monopoly as any public-service business still in the hands of private owners. Furthermore, there would be certain economies in the operation of telephone lines in connection with the postal service — such as the use of the present real estate of the postal service and the use

Ownership or
exclusive regu-
lation by the
Federal Govern-
ment of
telephone lines

¹ *Government Ownership of Electrical Means of Communication*, 63d Cong., 2d Sess., Document no. 339, p. 13.

of stamps for the collection of charges. If these properties are not taken over and operated by the Federal Government, or taken over by the Government and operated by private corporations under licenses, there should be established, it seems to us, exclusive federal regulation of the private corporations.

Another class of properties where the question of possible federal control enters in are the water-power developments on navigable streams. Undoubtedly the Federal Government has the right to exercise over these properties any degree of control that it sees fit. On the other hand, the States where any particular water-power developments may be situated are likely to feel that regulation belongs to them. There were introduced in the Sixty-third Congress various bills dealing with this subject. A suggestion which has in it many reasonable features for a settlement of this question is as follows: —

Water-power
developments

- (1) Public ownership, federal or state, of the site and of the water-power.
- (2) Lease to a private corporation for operation.
- (3) Control over competition, service, and rates by some commission.

It seems to us that federal ownership of the site and water-power, lease to a private corporation for operation and control over competition, service, and rates by some federal commission, would be a reasonable solution in the cases of corporations doing an interstate business, and a similar programme with the State substituted for the National Government in the cases of corporations doing a business wholly within one State. The same danger of conflict of authority, however, together with the fact that the Federal Government has ultimate control over navigable streams, may make it desirable to have the whole matter considered a concern of the Federal Government. It is to be hoped that the settlement of this problem will not be such as to discourage the development of water-power.

Broad relation
of public-ser-
vice corpora-
tions to the
people

In the entire matter of the relation of public-service corporations to the public, there is likely to be from time to time more or less of a see-saw between abuse of opportunities by private interests and over-severity or narrowness on the part of the public or its representa-

tives. Regulation by commissions may swing like a pendulum from a policy of undue interference and repression to a policy of undue subservience to corporation influence. It is well to remember, as Mr. Vail, president of the American Telephone and Telegraph Company, has said in substance, that the prosperity and even the existence of the public-service corporation is dependent in the last resort on the good-will and acquiescence of the public.¹ Only on the basis of giving good service at reasonable rates, obeying the laws and recognizing public opinion can private ownership of public-service corporations endure.

In an attempt to make clear certain principles governing the safety of public-service corporation bonds, we have discussed earlier in this chapter the relation of debt to property or assets. We wish now to say a few words about earnings.

In the matter of gross earnings, public-service corporations have shown a marked degree of growth and stability over a long series of years: for instance, whereas the gross earnings of steam railroads, operating 199,726 miles of road, for the year ending December 31, 1908, — the first full year after the panic of 1907, — showed a loss of 11.90 per cent compared with the previous year,² the gross earnings of forty representative public-service corporations for the same period showed an increase of about 7.15 per cent.³ Again, railroads operating 249,726 miles of road showed for the calendar year 1914 a loss in gross earnings of 6.79 per cent compared with 1913,⁴ whereas forty representative public-service corporations showed for the same period an increase of about 4.13 per cent.⁵ The experience of most public-service corporations has been that of a more or less steady increase in gross earnings through good times and bad.⁶

¹ See Address of Theodore N. Vail, President, at the opening of the Annual Conference of the Bell Telephone System, New York, October, 1913.

² *Commercial and Financial Chronicle*, "The Financial Review" (Annual, 1915), p. 106.

³ Figures from Messrs. N. W. Harris & Co., Inc.

⁴ *Commercial and Financial Chronicle*, "The Financial Review" (Annual, 1915), p. 106.

⁵ Figures from Messrs. N. W. Harris & Co., Inc., in letter dated March 30, 1915.

⁶ During the current year (1915), the "jitneys" have cut into the earnings of street railways somewhat seriously. Our opinion is that the "jitneys" ultimately will serve

In the matter of net earnings, we give below some figures for net earnings per one hundred dollars of outstanding securities of gas and electric companies in most of the large cities of the United States as compared with figures for railroads and industrial concerns:—

*Net earnings per one hundred dollars of outstanding securities
1902-11, inclusive*

Gas and electric companies.....	\$8.45
Industrials.....	7.79
Railroads.....	4.25

As illustrating the freedom from dangerous fluctuations in net earnings, the following figures giving the average annual amount of securities in receivers' hands per one hundred dollars of outstanding securities during a period of thirty years, from 1882 to 1911 inclusive, may be of interest:—

Net earnings
and receiver-
ships

Gas and electric companies.....	\$.37
Railroads.....	1.84
Industrials.....	2.07

The above figures show a far better record as to receiverships for gas and electric companies than for railroads and industrials.¹

We will refer briefly to the question of receiverships and reorganizations of public-service corporations. The same problems of readjusting capitalization and exchanging old securities for new as we found in the cases of steam railroads have arisen in the cases of public-service corporations.

Interesting reorganizations are those of the Michigan Telephone Company (1904), controlling the Bell Telephone business in the State of Michigan; the Chicago Union Traction Company (1907), controlling a large part of the street-railway business in Chicago; the Hudson River Electric Power Company (1911), controlling hydro-electric plants in New York State; and the Metropolitan Street-Railway Company (1911), controlling most of the surface street-railway lines in New York City.

principally as useful feeders rather than as dangerous competitors of the street railways.

¹ Information obtained from pamphlets published by Messrs. Henry L. Doherty & Co., dated February 20, 1913, and April 21, 1913.

The properties of the Michigan Telephone Company were sold at foreclosure to interests representing the bondholders November 4, 1903. There had been default in interest due July 1, 1902, on \$4,715,000 mortgage bonds. As is usual in such cases, many reasons may be brought forward to account for the default. In a general way, it may be said that the community served had grown too fast for the company. Rapid extensions were required, the rates were too low to pay a fair return on the new capital, and the physical condition of the properties deteriorated. On the whole, the management was not able to cope with the situation. There was, moreover, considerable competition from independents — especially in Grand Rapids. The attitude of the public was unfriendly. There was a considerable floating debt held largely by the same interests that controlled the stock. The physical properties of the company had been appraised at an amount considerably in excess of the bonded debt. The price obtained at foreclosure sale¹ was \$4,100,000 — compared with a bonded debt of \$5,000,000. The company was reorganized according to plan shown in the table on page 242.

Reorganization
of the Michi-
gan Telephone
Company

This reorganization may be said to have been entirely in the interests of the old bondholders. In December, 1909, the market value of the securities received in exchange for each \$1000 of old Michigan Telephone 5 per cents was, at the bid prices, exactly \$1300.² Later, about ninety per cent of the common stock of the Michigan State Telephone Company was exchanged for stock of the American Telephone and Telegraph Company on the basis of five shares of the former for four shares of the latter.

The properties controlled by the Chicago Union Traction Company — operating mostly on the north and west sides of the City of Chicago — were sold at foreclosure to a protective committee January 25, 1908. Many of the old franchises had expired, and the so-called “Ninety-nine-Year Act” — which the companies had considered gave them the right to operate all their lines in the city of Chicago — had been

Reorganization
of the Chicago
Union Traction
Company

¹ *Commercial and Financial Chronicle*, vol. 77, p. 1750.

² Bank and Quotation Section of the *Commercial and Financial Chronicle*, December 4, 1909, pp. 31 and 48.

MICHIGAN STATE TELEPHONE COMPANY

(New company)

Plan of organization and adjustment dated January 30, 1904¹

Old securities	Cash and new securities for each \$1000 of old securities and interest				Right to subscribe to new capital per \$1000 old bond
	Cash to adjust interest	New 20-year 5 per cent bonds	New 6 per cent cumulative preferred stock	New common stock voting-trust certificates	
Michigan Telephone 5% 1909 (\$4,715,000).....	\$4.16	\$800.00	\$325.00	\$200.00	\$174 cash for \$60. bonds, \$150 preferred stock and \$190 common stock.
Michigan Telephone 5% 1917 (underlying mortgage, \$285,000) Floating debt Capital stock (\$5,000,000)	Left undisturbed and provision made for payment when due. Wiped out at foreclosure sale.				.

The capitalization before reorganization was: Bonds, \$5,000,000; common stock, \$5,000,000; total, \$10,000,000. After reorganization: Bonds, \$4,466,000; preferred stock, \$1,285,000; common stock, \$3,500,000; total, \$10,251,000.

¹ Pamphlet plan. See also *Commercial and Financial Chronicle*, vol. 78, p. 586, and *Moody's Manual* (1903), p. 1274.

held by the United States Supreme Court ¹ to be not a franchise. There began a long fight, led by ex-Mayor Dunne, for municipal ownership and operation. During this fight the physical condition of the properties deteriorated badly. The holding company — the Union Traction Company — was grossly overcapitalized and was justly unpopular. Receivers were appointed for the North Chicago Street-Railroad Company and the West Chicago Street-Railroad Company, the two leading operating companies, in April, 1903.² At foreclosure sale,³ the price obtained for the combined properties was \$2,090,000, compared with a total debt of \$33,490,126. The companies were reorganized in accordance with plan shown on page 244.

This reorganization was in the interests, partly of the old security-holders, but more in the interests of the public. Perhaps its primary object was to make possible the giving by the successor of the old companies of adequate street-railway service to the city of Chicago. The old security-holders have not under all the circumstances fared particularly well up to date.

The properties of the Hudson River Electric Power Company and its seven controlled companies were sold at foreclosure sale August 29, 1911. The troubles of the old companies, besides the complicated nature of their relations to one another, were due mainly to unexpected engineering problems which resulted in greatly increased costs and finally in overcapitalization. There were in addition these difficulties: inadequate control of the water flow and inadequate steam reserve, low-priced contracts, poor earnings, and lack of strong financial backing. Receivers were appointed in November, 1908.⁴ The price obtained at foreclosure ⁵ — including the property of the Madison County Gas and Electric Company, sold August 31, 1911 — was \$7,675,000, compared with a total debt of the old companies of \$11,965,667. The properties were reorganized in accordance with plan given on page 245.

Reorganization
of the Hudson
River Electric
Power Com-
pany and its
controlled
sub-companies

¹ Act approved February 6, 1865 (amending an act approved February 14, 1859, and an act approved February 21, 1861), entitled "An Act concerning horse railways in the City of Chicago." See *Blair v. City of Chicago, etc.*, 201 U.S. 400; 26 Sup. Ct. 427.

² *Poor's Manual of Railroads* (1907), p. 1085.

³ *Commercial and Financial Chronicle*, vol. 86, p. 284.

⁴ *The Corporation Service* (1910), p. 1735.

⁵ *Commercial and Financial Chronicle*, vol. 93, p. 592.

CHICAGO RAILWAYS COMPANY

(New company)

Modified plan of reorganization and readjustment, dated October 15, 1907, with particular reference to the old bonds ¹

Old securities	New securities for each \$1000 of old securities — Consolidated mortgage 20-year gold bonds, 4% to February 1, 1912, and then 5%			Remarks
	Series A — senior lien after first mortgage	Series B — junior to Series A	Series C — junior to Series B — annual sinking fund if earned	
North Chicago City Railway. First mortgage 4% bonds (\$500,000) . . .	\$1000			To rehabilitate the property under the ordinance granting a new franchise, a new first mortgage (20-year 5% bonds), without definite limit as to amount to be issued, was placed ahead of Series A, B, and C bonds. Provision was made through the sale of notes for payment in cash of the following: \$100,000 Chicago Passenger Railway first mortgage 6% bonds; receivers' certificates, about \$672,000; car-trust and equipment obligations, \$760,000; and real-estate mortgages, \$190,000. The amount of the new capital stock was made \$100,000, against which were issued participation certificates, to be exchanged in various proportions for old stocks. The old stock of the North Chicago City Railway (\$240,000) received in addition \$1800 per \$1000 in Series B bonds, the stock of the Chicago West Division Railway (\$624,000), \$800 per \$1000 in Series B bonds, and the Chicago Passenger Railway stock (\$670,300) received \$250 per \$1000 in Series B bonds.
Second mortgage 4½% bonds (\$2,500,000) . . .	1000			
Chicago West Division Railway. First mortgage 4½% bonds (\$4,012,000)	1000			
North Chicago Street Railroad. First mortgage 5% bonds (\$3,171,000)	200	\$800		
Refunding 4½% bonds (\$1,614,000) . . .	—	1000		
West Chicago Street Railroad. First mortgage 5% bonds (\$3,683,000)	200	800		
Consolidated 5% bonds (\$6,317,000) . . .	—	1000		
Certificates of indebtedness (\$497,000) . . .	—	600		
Chicago Passenger Railway. Consolidated 5% bonds (\$1,306,000) . . .	—	1000	\$400	
West Chicago Street Railroad Tunnel. First mortgage 5% bonds (\$1,500,000) . . .	500	500		
Judgments, promissory notes, and certificates of indebtedness of receivers of No. Chicago St. R.R. Co., W. Chicago St. R.R. Co., and Chicago Union Traction Co. (\$4,390,126)	—	—	1000 ²	

The total debt before reorganization was \$33,490,126 and after reorganization, \$46,732,800. The capital stock of the Union Traction Company was \$12,000,000 preferred; \$20,000,000 common. The capital stock of the Chicago Railways Company is \$100,000.

¹ Circular, and *Commercial and Financial Chronicle*, vol. 85, pp. 129, 126, 1576; *Poor's Manual of Railroads* (1907), pp. 1083-86.

² For modification in part of this allotment, see *Commercial and Financial Chronicle*, vol. 85, p. 1276.

ADIRONDACK ELECTRIC POWER COMPANY

(New company)

Reorganization plan, July 31, 1911¹

Old securities	Cash and new securities for each \$1000 of old securities			Remarks
	Cash	New 6% preferred stock ²	New common stock ³	
Hudson River Water Power — First mortgage 5% bonds (\$2,000,000)	\$1000 and interest			No assessments. Capital necessary to pay off bonds in cash and for new construction, working capital, etc., raised by sale to bankers of \$5,000,000 new first mortgage fifty-year bonds and by underwriting or sale of new preferred and common stock. Net stock capitalization of old companies, amounting to between \$6,000,000 and \$6,300,000, was wiped out at foreclosure.
Hudson River Power Transmission —	1000 and interest			
First mortgage 5% bonds (\$500,000)	1000 without interest			
Refunding 5% bonds (\$750,000)	1000 and interest			
Saratoga Gas, Electric Light and Power —	1000 and interest			
First mortgage 5% bonds (\$123,500)	1000 and interest			
Notes payable (\$97,167.15)	1000 and interest			
Empire State Power —	1000 and interest			
First mortgage 5% bonds (\$210,000)	1000 and interest			
Ballston Spa Light and Power —	1000 and interest			
First mortgage 6% bonds (\$35,000)	500 without interest			
Madison County Gas and Electric —	100 without interest			
First mortgage 5% bonds (\$200,000)	—	\$400	\$600	
Consolidated 5% bonds (\$50,000)	—	100	900	
Hudson River Electric — First mortgage 5% bonds (\$3,000,000)				
Hudson River Electric Power —				
First mortgage 5% bonds (\$5,000,000)				

The capitalization of the old companies was: Bonds and notes, \$11,965,667; stock (net), \$6,000,000 (\$6,300,000); total, \$17,965,667.

The capitalization of the new company is: Bonds and notes, \$5,000,000; stock, \$2,500,000 (preferred); \$6,500,000 (common); total, \$17,000,000.

¹ Pamphlet Plan and Circular. See also *Commercial and Financial Chronicle*, vol. 93, p. 348; *The Corporation Service* (New York, 1911), pp. 13, 38-44.

² Non-cumulative for five years, cumulative thereafter; preferred as to "distribution."

³ Both classes of stock to be in a voting trust for five years.

This reorganization, like that of the Michigan Telephone Company, was entirely in the interests of the old bondholders. There was made, however, a sharp distinction between the old bonds of the Hudson River Electric Company, the Hudson River Electric Power Company, and the Madison County Gas and Electric Company, as compared with the old bonds of the other five companies.

The lines of the Metropolitan Street-Railway Company — controlling most of the surface street-railway traffic in New York City — were sold under foreclosure December 29, 1911. As is usual in such cases, the causes of the trouble were many and various. There was great congestion of traffic; and owing to the building of the subways, the traffic had to be moved under changed conditions. Through the liberal giving of transfers, the average fare had been reduced beyond the point of profit. Added to these causes were heavy cost of repair work and increased expenses in other directions. There had been also gross over-capitalization, waste of assets, and mismanagement. The physical condition of many of the lines became deplorable. Receivers were appointed "about" September 27, 1907.¹ At foreclosure sale² the price obtained for the property represented by the old 5% bonds was \$10,000,000, and for that covered by the refunding 4% bonds, \$2,010,000, or a total of \$12,010,000. This compared with a total debt held by the public before reorganization of \$53,585,000. The properties were reorganized in accordance with the plan shown on page 247.

This reorganization was a good deal like many steam-railroad reorganizations. There was an effort to recognize all interests — including those of the old stockholders. As in most steam-railroad reorganizations, the stockholders were assessed to furnish new capital.

It is to be noted that in the two street-railway reorganizations treated above, the total debt after reorganization was considerably greater than before reorganization. In the case of the New York Railways Company, however, a large part of the new debt was represented by bonds the

Reorganization
of the Metropolitan
Street-Railway
Company

Summary of
four reorgani-
zations

¹ *Plan and Agreement for the Reorganization of the Metropolitan Street-Railway Company*, p. 2.

² *Commercial and Financial Chronicle*, vol. 93, p. 1787.

NEW YORK RAILWAYS COMPANY

(New company)

Plan and Agreement for the Reorganization of the Metropolitan Street-Railway Company, dated November 20, 1911

Old securities	New securities for each \$1000 of old securities			Assessments per \$1000	Remarks
	New first real estate and refunding mortgage gold 4% bonds	New 30-year adjustment mortgage 5% income gold bonds	New stock or certificates		
Metropolitan Crostown first mortgage 5% bonds (\$600,000) and interest.....	\$150	\$850			There were left undisturbed in the reorganization \$21,946,000 bonds held by the public and \$9,508,000 stocks, or a total of \$31,454,000 securities held by the public. There was a total reduction in securities of \$41,883,895, but an increase in debt of \$17,062,500. The new first mortgage was not limited in amount. The adjustment bonds could elect one less than a majority of the board of directors until 5% interest was paid on the bonds.
Unpaid balance Central Crostown collateral notes (\$1,935,000).....	175.50	824.50			
Metropolitan general and collateral mortgage 5% bonds and interest (\$12,500,000).....	500	1000			
Metropolitan refunding mortgage 4% bonds and int. (\$16,604,000).....	250	750			
Improvement notes made by the Metropolitan Company to the Metropolitan Securities Company, other than those in the possession of the receiver of the New York Company or the receivers of the Metropolitan Company.....	88.30	53	\$309.10	\$129	
Central Crostown stock (\$600,000)	88.30	53	309.10	129	
Metropolitan stock (\$52,000,000) ..	88.30	53	309.10	129	

Total securities held by the public before reorganization: Bonds, debentures and collateral notes, \$3,585,000; stocks, \$61,108,000; total, \$115,693,000.
 Total securities held by the public after reorganization: Bonds, debentures and collateral notes, \$70,047,500; stocks, \$47,008,000; total, \$97,055,500.

1 Pamphlet Plan. See also *Commercial and Financial Chronicle*, vol. 93, p. 1787.

interest payments on which were conditional, and in the case of the Chicago Railways Company, by bonds bearing at first reduced rates of interest. Both reorganizations sought to reduce largely stock capitalization. In the other two reorganizations discussed, — that of the Michigan Telephone Company and that of the Hudson River Electric Power Company and its controlled companies, — the debt was reduced after reorganization. In the four reorganizations the principal methods of raising new capital were: Michigan State Telephone Company, sale of new securities to old bondholders and to bankers; Chicago Railways Company, sale of new first-mortgage bonds to bankers; Adirondack Electric Power Corporation, sale of new first-mortgage bonds to bankers; New York Railways Company, assessment of certain old noteholders and of old stockholders.

Summary of situation of public-service corporations	In summarizing the situation of public-service corporations we would say: (1) that public-service corporations to-day are recognized generally as regulated monopolies; and (2) that the stability of the business and earnings of such corporations are very great.
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Examples of strong public-service corporation bond issues	In trying to determine the safety of any given issue of public-service corporation bonds, many of the same considerations prevail as in the case of steam-railroad bonds. A first-mortgage bond of a street-railway, gas, electric light and power, or telephone company, having a large margin of property above its debt and located in an important community, is, other things being equal, well secured. Examples of exceedingly strong public-service corporation bond issues are: New York Telephone $4\frac{1}{2}\%$ 1939, Cleveland Railway 5% 1931, Detroit Edison 5% 1933, and Laclede Gas Light (St. Louis), first 5% 1919. The New York Telephone $4\frac{1}{2}\%$ bonds are part of a closed mortgage for \$75,000,000 (\$3,340,750 of which have been retired by sinking fund), and are secured by a first lien, subject only to \$3,483,000 underlying or assumed bonds, on all the property of the company now owned or hereafter acquired. The assets of the company have been appraised at from somewhat over \$200,000,000 to over \$250,000,000. The company operates the Bell telephone system throughout the State of New York and also in important territory in New Jersey. It also controls valuable lines in Pennsyl-
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vania.¹ The Cleveland Railway 5% bonds are part of an outstanding issue of \$5,495,000, are secured by a first mortgage on all the lines, and are followed by \$25,784,900 capital stock representing property.² The company operates, under excellent franchise arrangements, the entire street-railway system in Cleveland, Ohio.³ The Detroit Edison first 5% bonds are part of a closed mortgage for \$10,000,000, and are secured by a first lien, direct or indirect, on all the property and franchises of the company in the city of Detroit. The replacement value of the company's property is estimated as somewhere near \$31,000,000.⁴ The company does all the commercial electric-lighting and industrial-power business in Detroit, Michigan.⁵ The Laclede Gas Light first 5% 1919 bonds are part of a closed first mortgage for \$10,000,000, and are followed by \$12,500,000 junior bonds, by \$2,500,000 preferred stock, and by \$10,700,000 common stock paying dividends of 7% per annum. The company has an unusually strong franchise, and does all the gas business in St. Louis, Missouri.⁶ It is to be remembered that no issue of public-service corporation bonds, or of any other kind of bonds, is perfect in all respects. Each issue must be judged after taking into consideration all the factors entering into its safety.

In the early days of public-service corporation bond issues, conservative bankers, in their desire to make an issue as strong as possible, often drew up a financial scheme which was too narrow and too rigid. For instance, many of the corporation bond issues were limited in total amount authorized to a figure which later proved to be entirely inadequate

Financial plan
should be
broad, flexible
and firm

¹ See Poor's *Manual of Public Utilities* (1915), pp. 781, 785, and 2265, and Railway and Industrial Section of the *Commercial and Financial Chronicle*, June 26, 1915, p. 159.

² In the valuation of the property by Judge Taylor, as a basis for the franchise granted in 1909, \$3,615,844 was allowed for franchise value. (See Electric Railway Section of the *Commercial and Financial Chronicle*, May 22, 1915, p. 31.)

³ Poor's *Manual of Public Utilities* (1915), pp. 862-64, and Electric Railway Section of the *Commercial and Financial Chronicle*, May 22, 1915, p. 31.

⁴ Information from dealers. The company is having made, for the Michigan Railroad Commission, an appraisal of its property.

⁵ Poor's *Manual*, pp. 1894-97 and 2252, and Railway and Industrial Section of the *Commercial and Financial Chronicle*, June 26, 1915, pp. 147-48, and dealers' circulars.

⁶ Poor's *Manual of Public Utilities* (1915), pp. 1099-1100, and Railway and Industrial Section of the *Commercial and Financial Chronicle*, June 26, 1915, p. 154.

for the needs of the corporation. Modern practice favors an authorized issue large enough to take care of all the legitimate future needs of the company, but limits the actual issue of bonds in such a way as to keep the debt reasonable compared with the value of the property and otherwise make secure the loan. This enables the corporation to finance on a satisfactory basis reasonable extensions of its plant and service, and at the same time it protects investors.¹ In general, it may be said that the financial plan of a public-service corporation should be at one and the same time broad, flexible, and firm.

One thing more remains to be said. The prices of public-service corporation bonds during the past ten or fifteen years, like the prices of all other bonds, have shown a considerable decline. This decline has been much less in the case of public-service corporation bonds, however, than it has been in the cases of state, municipal, and railroad bonds. Even since the war, some of the very strongest public-service corporation bond issues, like New York Telephone 4½ per cents, Cleveland Railway 5 per cents, and Detroit Edison 5 per cents, are selling near the highest prices at which they have ever sold.² This is a recognition on the part of investors of the various features of strength and stability which we have tried to point out in this chapter.

Final test is willingness of bondholders to take the property for the bonds

As a final word, we would say that the issue of public-service corporation bonds based on a property and business which the bondholders would be glad to take, if necessary, for the bonds is the issue which investors should be willing to buy.

¹ For further elaboration of this idea, see Stone & Webster, *Public Service Journal*, August, 1914, pp. 99-106.

² Some of the less well-secured bonds, on the other hand, and bonds on some of the smaller properties have shown since the beginning of the war a considerable decline.

CHAPTER VII

INDUSTRIAL BONDS

INDUSTRIAL bonds, as the term will be used in this chapter, comprise bonds of manufacturing and trading concerns.

Definition of industrial bonds

The issue of industrial bonds is a development mostly of the past fifteen years. The very existence of a form of industrial organization suitable for public financing is comparatively recent. In the early history of this country, business combinations took the form of partnerships.¹ Not until 1811, when the New York Legislature passed a General Incorporation Act, did the movement for carrying on business by means of the corporation attain any importance.² This act was followed by similar legislation in other States.³ At the beginning of the nineteenth century, there were in America probably not more than one hundred corporations — of which at least one half were in Massachusetts. By 1840, corporations had multiplied “with a flexibility and variety previously unknown.”⁴ Among the earliest industrial corporations of importance later, were the Standard Oil Company of Ohio⁵ organized in 1870, the Westinghouse Electric and Manufacturing Company⁶ incorporated in 1872, and Swift & Company,⁷

Origin and development of industrial concerns

¹ Robert L. Raymond, in *Harvard Law Review*, vol. xvi, p. 80.

² *Laws of New York 1813*, vol. 1, p. 245. (34th Session, chap. LXVII, passed March 22, 1811.) The first business corporation in the United States, however, was chartered in Pennsylvania in 1768: “The Philadelphia Contributionship for Insuring Houses from Loss by Fire.” (*Laws of Pa.* chap. DLXXVI.) See *Harvard Law Review*, vol. II, p. 165.

³ *Public Acts of Connecticut 1836-43*, chap. LXIII, p. 49, approved June 10, 1837. *Laws of Michigan 1837*, no. CXXI, approved March 22, 1837. Until 1851, no corporation could be organized in Massachusetts without a special act of the legislature. A general law governing the organization and conduct of corporations created by special act was passed in 1808. (*Stats. 1808*, chap. 65.) See *Report of the Committee on the Corporation Laws* (1903), p. 16. P. F. Hall, *The Massachusetts Business Corporation Law of 1903* (Boston, 1908), p. 1.

⁴ Francis Lynde Stetson, in *Atlantic Monthly*, vol. cx, pp. 31-32.

⁵ *Poor's Manual of Industrials* (1913), p. 1615.

⁶ *Ibid.* (1914), p. 1112.

⁷ *Ibid.* (1914), p. 955.

incorporated in 1885. The combination in one form or another of the interests of individual corporations was a natural step from this. Between 1899 and 1902, the movement attained large proportions. During this period the American Can Company, the American Woolen Company, the International Harvester Company of New Jersey, the United Fruit Company, and the United States Steel Corporation¹ were formed by combining the business of many other corporations. Such units as these were large enough to need financial assistance from the public and important enough to appeal to the public with chance of success. In 1910, according to Poor's "Manual of Industrials," there were outstanding for the account of manufacturing and miscellaneous companies bonds amounting to \$2,585,694,207 and stock amounting to \$8,233,035,721, a total capitalization of \$10,818,729,928.²

In discussing industrial bonds, the first great difference which strikes one between such bonds and practically all other classes of corporation bonds is the greater degree of fluctuation in the business: that is, whereas the gross business of steam railroads is likely to fall off in periods of depression from five to fifteen per cent and the business of street-railway, gas, or electric light and power concerns varies in times of general depression from a small decrease to an increase, say, between five and ten per cent, the profits of industrial concerns at such times are likely to show a decline often of between twenty and fifty per cent. We give in the tables on pages 253-55 the item corresponding most nearly to net earnings of some of our leading industrial concerns engaged in many different kinds of business for the years 1903 and 1904, 1907 and 1908, and 1913 and 1914, together with percentage of change.³

The total period between 1903 and 1914 is too short to be conclusive or to be much more than an indication as to the fluctuation in any given business. Owing to the fact that very few of our large industrial concerns reported earnings much before 1903, it has been thought hardly worth while to go back of that date. An examina-

¹ For organization of above corporations see Poor's *Manual of Industrials* (1914), pp. 33, 102, 1008, 1041, 1296.

² *Ibid.* (1910), Introduction, p. x.

³ For combined table showing percentage of change in net earnings for the three periods, see Appendix, pp. 308-309.

Fluctuating
nature of the
business done
by manufactur-
ing and trading
concerns

NET EARNINGS OF INDUSTRIAL COMPANIES¹

Name of company	Item	Fiscal year	Amount	Fiscal year	Amount	Per cent of increase or decrease
American Agricultural Chemical.....	"Total Income"	June 30, 1903	\$2,037,327	June 30, 1904	\$2,148,225	+ 4.45
American Can.....	"Profit,"	March 31, 1904	2,384,370	March 31, 1905	2,866,018	+ 20.58
American Locomotive.....	"Net Earnings,"	June 30, 1903	1,033,410	June 30, 1904	1,063,766	+ 2.98
American Thread.....	"Profits,"	March 31, 1904	2,228,187	March 31, 1905	2,167,703	- 2.73
American Tobacco.....	"Net Earnings after all Charges,"	Dec. 31, 1903	2,343,520	Dec. 31, 1904	2,304,596	- 1.66
American Woolen.....	"Net Profits,"	Dec. 31, 1903	3,839,834	Dec. 31, 1904	3,728,320	- 2.91
Central Leather.....	"Total Income,"	Dec. 31, 1903	4,571,003	Dec. 31, 1904	4,688,148	+ 2.59
Corn Products.....	"Gross Profits from Operation,"	Feb. 28, 1904	3,561,632	Feb. 28, 1905	3,585,148	+ .67
Eastman Kodak of New Jersey.....	"Net Profits,"	Dec. 31, 1903	2,925,691	Dec. 31, 1904	3,339,148	+ 14.15
General Asphalt.....	"Net Trading Profits,"	Dec. 31, 1903	1,732,661 ²	Dec. 31, 1904	2,309,608	+ 33.65
General Chemical.....	"Net Profits,"	Jan. 31, 1904	1,732,661 ²	Jan. 31, 1905	2,309,608	+ 33.65
General Electric.....	"Balance,"	Dec. 31, 1903	7,789,370	Dec. 31, 1904	7,154,746	- 8.16
International Paper.....	"Net,"	June 30, 1904	7,631,461	June 30, 1905	7,657,883	+ .34
International Steam Pump.....	"Profits from Mfg. & Trading,"	March 31, 1904	2,821,430	March 31, 1905	2,657,413	- 5.84
Mergenthaler Linotype.....	"Total Net Profits,"	Sept. 30, 1903	3,750,553	Sept. 30, 1904	3,853,895	+ 2.67
National Biscuit.....	"Net Profits,"	Dec. 31, 1903	1,569,563	Dec. 31, 1904	1,713,927	+ 9.26
National Lead.....	"Net Earnings,"	Jan. 31, 1904	813,468	Jan. 31, 1905	1,105,861	+ 35.66
National Bag and Paper.....	"Profits,"	Dec. 31, 1903	2,977,728	Dec. 31, 1904	2,907,115	- 2.34
United Fruit.....	"Total Net Earnings,"	Sept. 30, 1903	2,820,709	Sept. 30, 1904	2,977,715	+ 5.31
United Shoe Machinery.....	"Net Earnings,"	March 31, 1904	2,354,815 ³	March 31, 1905	3,038,115	+ 29.00
United States Realty and Improvement.....	"Total Income,"	May 31, 1904	2,354,815 ³	May 31, 1905	2,938,967 ⁴	+ 24.55
United States Rubber.....	"Operating Profits,"	March 31, 1904	2,624,877	March 31, 1905	5,029,725	+ 89.57
United States Steel Corporation.....	"Net Earnings,"	Dec. 31, 1903	109,171,152	Dec. 31, 1904	73,176,532	- 33.97

¹ Figures from *Commercial and Financial Chronicle*, vol. 78, pp. 1050-1051; vol. 79, pp. 784, 785, 1022, 1039, 2146, 2453; vol. 80, pp. 598, 870, 1055, 1110, 1422, 1477, 1726, 1853, 1970, 2218, 2341, 2456; vol. 81, pp. 153, 203, 209; vol. 86, p. 1473.

² Figured from thirteen months.

³ One month estimated.

⁴ Two months estimated.

NET EARNINGS OF INDUSTRIAL COMPANIES¹

Name of company	Item	Fiscal year	Amount	Fiscal year	Amount	Per cent of increase or decrease
American Agricultural Chemical.....	"Total Income"	June 30, 1907	\$2,035,089	June 30, 1908	\$2,037,819	+ .07
American Can.....	"Earnings"	Dec. 31, 1907	3,246,858	Dec. 31, 1908	3,111,568	- 4.16
American Ice.....	"Gross Earnings"	Oct. 31, 1907	1,340,244	Oct. 31, 1908	1,557,873	+ 16.24
American Locomotive.....	"Net Earnings"	June 30, 1907	6,771,105	June 30, 1908	4,686,760	- 30.35
American Sugar Refining.....	"Net Earnings after all Charges, etc."	Jan. 1, 1908	8,749,201	Jan. 1, 1909	6,509,430	- 25.67
American Tobacco.....	"Net Earnings"	Dec. 31, 1907	27,371,090	Dec. 31, 1908	28,704,405	+ 4.87
American Woolen.....	"Net Profits"	Dec. 31, 1907	3,456,606	Dec. 31, 1908	1,260,705	- 63.62
Central Leather.....	"Earnings"	Dec. 31, 1907	4,159,230	Dec. 31, 1908	4,482,875	+ 7.78
Corn Products Refining.....	"Profits from Operation"	June 30, 1908	9,357,270	June 30, 1908	9,549,553	+ 2.02
Distillers Securities.....	"Gross Profits"	Feb. 28, 1909	4,541,696	Feb. 28, 1909	3,549,553	- 21.96
Eastman Kodak of New Jersey.....	"Net Earnings"	Dec. 31, 1907	6,205,453	Dec. 31, 1908	6,472,519	+ 4.31
E. I. du Pont de Nemours Powder.....	"Net Profits"	Dec. 31, 1907	3,959,568	Dec. 31, 1908	4,029,531	+ 1.79
General Asphalt.....	"Net Trading Profits"	Jan. 31, 1908	1,603,890	Jan. 31, 1909	1,648,594	+ 2.67
General Chemical.....	"Net Profits"	Dec. 31, 1907	4,430,488	Dec. 31, 1908	4,381,740	- 1.10
General Electric.....	"Balance"	Jan. 31, 1908	6,586,653	Jan. 31, 1909	4,862,733	- 26.09
International Harvester Company.....	"Net Profit"	Dec. 31, 1907	8,686,458	Dec. 31, 1908	8,885,689	+ 2.31
International Paper.....	"Net"	June 30, 1907	2,841,470	June 30, 1908	2,838,170	- .12
International Steam Pump.....	"Profits from Mfg. & Trading"	March 31, 1908	1,077,597	March 31, 1909	1,395,803	+ 29.81
National Biscuit.....	"Net Profits"	Jan. 31, 1908	4,101,415	Jan. 31, 1909	3,566,610	- 12.81
National Lead.....	"Net Earnings"	Dec. 31, 1907	9,942,245	Dec. 31, 1908	9,905,753	- 0.34
National Oats.....	"Profits"	Dec. 31, 1907	1,305,166	Dec. 31, 1908	1,125,748	- 13.74
Quaker Oats.....	"Gross Profits"	June 30, 1907	5,535,543	June 30, 1908	2,391,328	- 57.56
Sears-Roebuck.....	"Dividends & Additions to Surplus"	Oct. 3, 1907	6,300,819	Oct. 3, 1908	7,666,114	+ 20.72
Swift & Company.....	"Profits"	Jan. 31, 1908	1,276,758	Jan. 31, 1909	1,685,963	+ 32.05
Union Bag & Paper.....	"Total Income"	Sept. 30, 1907	6,286,909	Sept. 30, 1908	4,041,091	- 35.75
United Fruit.....	"Earnings"	March 1, 1908	4,664,616	March 1, 1909	4,760,971	+ 2.14
United Shoe Machinery.....	"Total Income"	Apr. 30, 1908	3,406,682	Apr. 30, 1909	3,468,359	+ 1.80
United States Realty and Improvement.....	"Operating Profits"	March 31, 1908	4,484,904	March 31, 1909	5,668,351	+ 26.50
United States Rubber.....	"Net Earnings"	Dec. 31, 1907	1,069,604,674	Dec. 31, 1908	91,847,710	- 91.14

¹ Figures from *Commercial and Financial Chronicle*, vol. 86, p. 1471; vol. 87, pp. 477, 676, 1086, 1159, 1296; vol. 88, pp. 155, 292, 372, 378, 502, 561, 623, 682, 745, 747, 820, 880, 881, 941, 1067, 1225, 1295, 1315, 1370, 1371, 1559; vol. 89, p. 100.

NET EARNINGS OF INDUSTRIAL COMPANIES¹

<i>Name of company</i>	<i>Item</i>	<i>Fiscal year</i>	<i>Amount</i>	<i>Fiscal year</i>	<i>Amount</i>	<i>Per cent of increase or decrease</i>
American Agricultural Chemical.....	"Total Income"	June 30, 1913	\$3,657,890	June 30, 1914	\$3,372,318	+ 46.89
American Can.....	"Earnings"	Dec. 31, 1913	6,445,679	Dec. 31, 1914	5,807,802	- 7.01
American Ice.....	"Gross Earnings"	Dec. 31, 1913	3,052,675	Oct. 31, 1914	1,801,483	- 40.96
American Locomotive.....	"Net Income"	June 30, 1913	2,826,484	June 30, 1914	2,501,251	- 62.47
American Sugar Refining.....	"Net Income"	Dec. 31, 1913	4,184,989	Dec. 31, 1914	6,139,390	+ 46.70
American Tobacco.....	"Net Earnings after Charges, etc."	Dec. 31, 1913	6,755,799	Dec. 31, 1914	9,043,046	+ 3.36
American Woolen.....	"Net Profits"	Dec. 31, 1913	6,777,685	Dec. 31, 1914	2,788,602	- 7.03
Central Leather.....	"Profits from Operation"	Dec. 31, 1913	6,251,168	Dec. 31, 1914	6,090,823	+ 2.04
Corn Products Refining.....	"Gross Profits"	Dec. 31, 1913	3,379,667	Dec. 31, 1914	3,634,828	- 20.18
Distillers Securities Corporation.....	"Net Profits"	June 30, 1913	3,046,165	June 30, 1914	3,634,809	- 40
Eastman Kodak of New Jersey.....	"Net Profits"	Dec. 31, 1913	14,162,436	Dec. 31, 1914	11,313,012	- 20.18
E. I. DuPont de Nemours Powder.....	"Net Earnings"	Dec. 31, 1913	5,347,685	Dec. 31, 1914	5,593,458	- 4.79
General Chemical.....	"Net Profits"	Dec. 31, 1913	2,860,441	Dec. 31, 1914	8,837,898	- 1.72
General Electric.....	"Profits from Sales"	Dec. 31, 1913	10,460,666	Dec. 31, 1914	8,670,963	- 12.03
General Motors.....	"Net Profits"	July 31, 1913	8,284,139	July 31, 1914	7,047,443	- 8.06
International Harvester Co. of New Jersey.....	"Income from Operations"	Dec. 31, 1913	13,284,671	Dec. 31, 1914	12,260,227	- 8.12
International Paper.....	"Net Earnings"	Dec. 31, 1913	2,317,667	Dec. 31, 1914	2,601,099	+ 12.21
National Biscuit.....	"Net Profits"	Jan. 31, 1914	5,166,016	Jan. 31, 1915	4,530,462	- 12.53
Procter & Gamble.....	"Net Earnings"	June 30, 1913	3,283,111	June 30, 1914	4,247,760	+ 11.40
Quaker Oats.....	"Profits"	Dec. 31, 1913	2,287,011	Dec. 31, 1914	2,367,252	- 3.31
Sears-Roebuck & Company.....	"Gross Profits"	Dec. 31, 1913	10,070,609	Dec. 31, 1914	9,770,794	- 2.91
Standard Oil of New York.....	"Net Earnings"	Dec. 31, 1913	16,212,985	Dec. 31, 1914	7,735,919	- 52.20
Swift & Company.....	"Net Earnings"	Sept. 26-27, 1913	10,604,597	Sept. 26-27, 1914	9,735,919	- 7.84
Underwood Typewriter.....	"Total Income"	Dec. 31, 1913	1,863,979	Dec. 31, 1914	841,434	- 53.33
United Fruit.....	"Net Earnings"	Sept. 30, 1913	1,863,979	Sept. 30, 1914	3,745,447	- 39.68
United Shoe Machinery Corporation.....	"Operating Profits"	March 1, 1913	6,166,168	March 1, 1914	6,188,115	+ 2.88
United States Rubber.....	"Net Earnings"	Dec. 31, 1913	14,30,147	Dec. 31, 1914	23,688,469	- 15.17
United States Steel Corporation.....	"Net Earnings"	Dec. 31, 1913	137,261,345	Dec. 31, 1914	71,663,615	- 47.76
Westinghouse Electric and Manufacturing.....	"Net Earnings"	March 31, 1913	4,571,272	March 31, 1914	4,777,222	+ 3.19
F. W. Woolworth.....	"Profits"	Dec. 31, 1913	6,401,118	Dec. 31, 1914	6,450,890	- 48

¹ Figures taken from *Commercial and Financial Chronicle*, vol. 98, pp. 1603, 1685; vol. 99, pp. 542, 605, 812, 813, 1746; vol. 100, pp. 137, 228, 305, 479, 552, 790, 807, 808, 809, 810, 804, 895, 975, 1344, 1434, 1516, 1908. *Twenty-third Annual Report of the General Electric Company*.

* Includes increase in value of stock of other corporations.

† First three months estimated.

tion of the above gains or losses in net earnings during periods of depression shows that it cannot be assumed that any given concern always will show a falling-off in earnings at such times. The performance of any given company depends much on the management and initiative shown. It is to be noted, however, that the United States Steel Corporation in all three periods showed a falling-off in net earnings of over thirty per cent; that the General Electric Company showed a substantial decrease in earnings in all three periods; that the American Woolen Company showed a loss in net profits in 1908 of over sixty-two per cent, and a change in 1914 from a net loss of \$677,685 to net profits of \$2,788,602; and that the American Locomotive Company showed a fluctuation in net earnings from a gain of over twelve per cent in 1904 to a loss of over sixty-two per cent in 1914. These figures show the extremely fluctuating nature of the business of manufacturing and trading concerns.

Another very important difference between industrial and other corporation bonds is the highly competitive nature, in most cases, of the business. The facts that no right of way, such as a steam railroad requires, and no franchise, such as a street-railway, gas, or electric light and power company is likely to require, are necessary for the creation and operation of an industrial concern, — together with the fact that an industrial concern can operate in an almost limitless field, — make, as a rule, the number of industrial concerns engaged in any one business and competing with each other directly much greater than the number of steam railroads, and, still more, public-service corporations, so competing. Under the regulation of rates by the Interstate Commerce Commission, railroad competition is drifting toward competition between sections of the country rather than between individual railroads; and competition between public-service corporations under the regulation of state commissions gradually is passing away. While industrial concerns are subject to a considerable measure of public control, the governing factor in their existence is likely always to be competition.

Owing to the above conditions, the management of industrial concerns is a matter of far greater relative importance than the management of steam railroads or of public-service corporations — especially from the point of view of the safety of their securi-

Competitive
nature of the
business done by
such concerns

ties. Where an entirely new business can be started without any great delay and where conditions of keen competition are likely to prevail, good or bad management is pretty nearly the whole story.¹ Valuable and efficient plants, large working capital, control of patented articles or of some necessary raw material, all are highly important and may be of great assistance in taking a corporation through a time of difficulty; but unless the plants are used wisely, economically, and profitably by the management, they may have very little value for any other purpose and may be rendered almost useless by the competition of another concern that has as good or better plant facilities and more efficient management, and the most impressive assets as well as other advantages may be dissipated under poor management.

Good management is perhaps the most important factor in the safety of industrial bonds

Owing to the fact that the management of industrial concerns may change at almost any time, the financing of such concerns should be and usually is considered in a different light from that either of steam railroads or of public-service corporations. It is a grave question whether strictly competitive manufacturing or trading concerns should be bonded at all. In the minds of many people, public financing through stock alone, either preferred or common, or through one class of stock only, is more legitimate and more satisfactory than creating bonded debt.

Grave question whether competitive manufacturing or trading concerns should be bonded

In the cases of industrial concerns controlling important and valuable patents, — such as the General Electric Company, — or in the cases of concerns controlling a large amount of some valuable natural resource like coal, iron ore, or phosphate rock, — such as the United States Steel Corporation or the American Agricultural Chemical Company, — or concerns owning a large amount of valuable real estate, — such as Swift & Company, — the creation of bonded debt may seem more legitimate and more expedient.²

Ownership of valuable patents or of some valuable natural resource or of a large amount of real estate may furnish a proper basis for bonding

¹ Professor Dewing, after an examination of thirty-two industrial reorganizations, says, "No business ever developed into a conspicuous success or a conspicuous failure, except through the ability or lack of ability of men." (*Corporate Promotions and Reorganizations* [Cambridge, 1914], p. 3.)

² In certain kinds of business, sometimes called specialty business — like that of

Even in these cases, however, and certainly in all ordinary competitive industrial concerns, the amount of plant assets compared with the amount of debt should be very much greater than in the case either of steam railroads or of public-service corporations. Furthermore, there should be in almost every case a large amount of net quick assets — that is, cash, bills receivable, or marketable securities.

Amount of plant and of quick assets compared with debt should be greater than in the case of steam railroads or of public-service corporations

Industrial bonds should be issued in serial form or else have a strong sinking-fund

In almost every case, moreover, it is wiser to have an industrial bond issue shaped up either with a strong sinking-fund or else as a serial issue, so that a reasonable proportion of the debt will be retired or provided for each year.

The question that we have discussed in previous chapters in the cases of steam railroads and of public-service corporations — the relation of such concerns to the public — has reached in the case of industrial concerns an interesting stage of development. What is the relation of our great manufacturing and trading concerns to the public? If such concerns are to issue bonds, it is highly important to know their general status. Do they exist legally? Do they carry on their business in conformity with law and with good business usage? Are they subject to interference on the part of the Government or to especially destructive competition? On what facts and conditions does their status depend? In the following pages we will attempt to outline or suggest possible answers to these questions.

Relation of great industrial concerns to the public

It may make this phase of our subject clearer if we outline the origin and growth of the so-called "trust problem." As stated earlier in this chapter, business combinations in the United States first took the form of partnerships. Then, under the authority of satisfactory corporation laws in New York, Massachusetts, Michigan, and other States, business began to be organized in the form of corporations. Subsequently there appeared these forms of combination: —

Historic forms of combination and origin of the trust question

(1) The gentlemen's agreement.

This was usually an informal arrangement to maintain prices Quaker Oats, Royal Baking Powder, or Baker's Chocolate — a well-established trademark, built up through advertising, is an asset of great value, but hardly of a kind suitable for bonding.

and sometimes to regulate production, and was illustrated in the cases of the United States Leather Company, the Glucose Sugar Refining Company, the National Cordage Company, and the United States Shipbuilding Company.¹

(2) The pool.

Under this plan several concerns engaged in a similar business agreed to divide the territory among themselves, to regulate the selling price of their commodity, and generally to establish a community of interest. This form of combination was illustrated in the cases of the glucose, cordage, and steel business.² It was finally held to be illegal,³ and became as far as known practically non-existent.

(3) The strict or true trust.

Here the several properties intended to be combined were transferred to individuals as trustees, who issued certificates of beneficial interest. The trustees managed the business of the several combined properties and paid dividends on the certificates issued. Examples of this form of organization were the old Standard Oil Trust, the Sugar Trust, the Whiskey Trust, and the National Cordage Association.⁴ This form of organization also was held to be illegal,⁵ and practically passed out of existence.⁶

(4) The large corporation — often in the form of a holding company.

The prohibition of pooling and the illegality of true trusts had the effect of driving practically all "big business" into the corporate form.⁷

This is the origin of what has loosely but commonly been called the "trust question."⁸

There are certain obvious and legitimate advantages of combination, or perhaps we may say of great size. Among these may be mentioned: —

Economic
advantages of
combination or
of great size

(1) Ability to handle large orders.

(2) Ability to buy in large quantities and therefore more cheaply.

¹ *Corporate Promotions and Reorganisations*, p. 519. ² *Ibid.*, pp. 76, 114, 520.

³ *United States v. Addyston Pipe & Steel Co.*, 175 U.S. 211.

⁴ *Corporate Promotions and Reorganisations*, pp. 116-17.

⁵ *People v. The North River Sugar Refining Co.*, 121 N.Y. 582; *State v. Standard Oil Co.*, 49 Ohio St. 137.

⁶ *Report of Industrial Commission*, vol. XIX, p. 607.

⁷ *Ibid.*, vol. XIII, p. 6. It is interesting to note that the cordage industry passed through all four forms of organization. (See Dewing, *Corporate Promotions and Reorganisations*, p. 518.)

⁸ For above account see Robert L. Raymond in *Harvard Law Review*, vol. XVI, pp. 80-81; Francis Lynde Stetson in *Atlantic Monthly*, vol. CX, pp. 31-32; and Dewing, *Corporate Promotions and Reorganisations*, pp. 518-21.

- (3) Ability to sell in large quantities and therefore at a smaller percentage of profit.
- (4) Ability to utilize waste.
- (5) Ability to save charges of transportation by shipping from the plant nearest in location to the consumer.
- (6) Ability to specialize labor.
- (7) Opportunity for experimentation.

These are what may be called the economic advantages of combination¹ or of great size.

There are also advantages of one kind or another in the combination of competing concerns in some form of organization. Among these may be mentioned: —

Saving of the
wastes of
competition

- (1) Saving in the cost of management or superintendence by the elimination of duplicate staffs.
- (2) Reduction in the number of salesmen.
- (3) Greater control of output and prices.

These may be called some of the savings of the wastes of competition.²

Possible dis-
advantages of
large-scale
operation

Very often these theoretical advantages are offset in practice by factors having an opposite effect. For instance: —

- (1) Large companies in purchasing a great amount of raw material sometimes push the price up against themselves.
- (2) Large concerns often are less able to avoid over-production in a falling market.
- (3) Heavy investment in specialized machinery sometimes makes a large concern peculiarly susceptible to changes in trade conditions.
- (4) The combination often is unwilling to change its methods of production or distribution in accordance with improvements in technique.³

To this class of difficulties may be added: —

- (1) The unwieldy size of some combinations has made almost impossible the obtaining of management able to cope with such a large situation.
- (2) There is likely to be too great diffusion of responsibility in the management of very large units.

¹ See Raymond in *Harvard Law Review*, vol. xvi, pp. 82-83.

² *Ibid.*, pp. 83-84.

³ See Dewing, pp. 558-62, and 564-65.

- (3) There is usually a lack of acquaintance on the part of the management with individual employees.
- (4) There is likely to be a lack of loyalty or single-mindedness on the part at least of some of the officers.
- (5) There is likely to be a lack of attention to the laborious parts of the business by higher officials.
- (6) The methods of marketing the product may be too mechanical.
- (7) There may be prejudice on the part of customers against improved methods of conducting the business.
- (8) There may be prejudice on the part of the customers against "trusts."
- (9) The combination is likely to be susceptible to political and legislative attacks and sometimes to blackmail.¹

In actual practice, the disadvantages of combination or of large size often have more than offset the advantages.

Such concerns as the Standard Oil Company, the American Brass Company, and the American Radiator Company have been able to evolve management which has given them in practice all the advantages of large-scale operation; on the other hand, other concerns, some of which we shall discuss later in this chapter, seem to have been handled in such a way as to develop most of the disadvantages and very few of the advantages of large-scale business. It is interesting if not wholly significant that in a time of general depression, such as the latter part of 1914 and the early part of 1915, the United States Steel Corporation showed record low earnings, whereas the Bethlehem Steel Corporation, under the personal management and initiative of Mr. Schwab, showed the largest net earnings in its history.

Neither the advantages nor the disadvantages of combination or of size should be confused with what may be called monopoly control. Monopoly control means the power to control the situation — the power to dictate terms to the laborer and the power to fix the price of goods to the consumer. Briefly, it is the power to do as one pleases.²

Successful and unsuccessful large-scale operation

Distinction between advantages or disadvantages of combination or size and monopoly control

¹ See Dewing, pp. 558-62, and 564-65.

² See Robert L. Raymond in *Harvard Law Review*, vol. xvi, pp. 82-84.

Desire (1) to secure the advantages of size, (2) to save the wastes of competition, and (3) to secure monopoly control, have been the three leading reasons for the combination of industrial concerns.¹

Motives for combination

Advantages of the corporate form of organization

If there is to be combination, there are many advantages in combining in the form of a corporation. In a corporation: —

- (1) Many persons are able to act as a single legal entity.
- (2) There is continuity of existence.
- (3) The liability of stockholders is limited in amount.
- (4) There is ability to raise a large capital because of the limited liability and the convenience of transferring evidence of ownership or stock certificates.
- (5) Actual management may be entrusted to a small body of men usually called the directors.

The corporation is the only known form of organization in which all these advantages exist together.²

The combining in the form of a corporation immediately places the corporation under possible public control; for the corporation derives its very existence from the public.³ If a given corporation is engaged in interstate commerce, — and most large corporations are, — it becomes subject not only to state, but to federal control.

The corporation is subject to public control

Except in a very limited way, this control was not exercised in any form by the Federal Government until 1890. The development of great combinations of capital in the form of corporations, — coincident with an almost phenomenal growth in population and resources in the United States, — together with a growing fear on the part of the people of the economic and social evils possible under the circumstances, led to the enactment in 1890 of the so-called Sherman Anti-Trust Law.⁴ The provisions of this law later were made applicable specifically

Enactment of the Sherman Anti-Trust Law

¹ Another reason often has been the desire of promoters or bankers to make a profit out of the promotion of the combination or the dealing in its securities.

² See *Harvard Law Review*, vol. xvi, p. 92. Some people would except voluntary associations from this statement.

³ See Williston on "History of Law of Business Corporations before 1800," *Harvard Law Review*, vol. ii, p. 112.

⁴ Act July 2, 1890 (26 Stat. L. 209).

to imports from any foreign country,¹ as well as to foreign and interstate commerce as a whole.

The important provisions of the Sherman Anti-Trust Law are as follows:—

Leading provisions of the Sherman Anti-Trust Law

Section 1. Every contract, combination in the form of trust or otherwise, or conspiracy in restraint of trade or commerce among the several States or with foreign nations is hereby declared to be illegal. (Such acts are made criminal and penalties are provided.)

Section 2. Every person who shall monopolize or attempt to monopolize, or combine or conspire with any other person or persons to monopolize any part of the trade or commerce among the several States or with foreign nations shall be deemed guilty of a misdemeanor. . . . (Penalties are provided.)

These provisions remain in force to-day. Until recently, this was the statute under which all federal suits against alleged illegal combinations in restraint of trade were brought.

How has this law worked in practice? To what extent has it been enforced? How has it been interpreted by the United States Supreme Court? Are its provisions as now interpreted wise or unwise? The answers to these questions will lead us far in estimating the present status of great industrial corporations in their relation to the public.

How has the Sherman Law worked?

The Sherman Anti-Trust Law has been enforced intermittently, spasmodically, and at times almost arbitrarily. Under President McKinley, it was hardly enforced at all; under President Roosevelt, it was enforced, it has been charged, against his enemies and not enforced against his friends; under President Taft, it was enforced apparently impartially, but under a conception of the Attorney-General as to what constituted a dangerous share of the total business in any given industry. All efforts at enforcement have been confined to a comparatively few cases, owing to the physical impossibility of instituting court proceedings—the only method of enforcement provided—against any large number of offenders covered by the act.²

Enforcement of the law.

¹ Act August 27, 1894 (28 Stat. L. 570), as amended by Act February 12, 1913 (37 Stat. L. 667).

² See J. H. Benton, "The Sherman or Anti-Trust Act," reprinted from *Yale Law*

The early interpretation of the Sherman Anti-Trust Law by the United States Supreme Court established these principles: —

Early interpretation of the law by the Supreme Court

- (1) Any combination which directly restrains interstate trade is illegal.
- (2) A holding company is a combination.
- (3) Restraint of trade means any restraint and not merely an unreasonable restraint.
- (4) Direct restraint of trade means restraint in some degree substantial.
- (5) Trade is restrained by the ending or limiting of competition among the members of the combination as well as when the business of others is injured.
- (6) The mere power to restrain trade is sufficient to bring a combination within the act.
- (7) This power need not be broad enough to cover the whole country or even a large part.¹

Until recently, this drastic and sweeping interpretation of the Sherman Anti-Trust Act was the law.

In its most important phase the law, as thus laid down by the United States Supreme Court, was a departure, not only from the apparent intention of Congress when passing the Sherman Act,² but also from a well-established rule of the common law. This rule was that "restraint of trade or commerce" meant a restraint that was unreasonable.³ In two of the cases in which a majority of the court held the Sherman Act applicable to any direct restraints of trade, opinions were delivered

This interpretation a departure from common law

Journal, March, 1909, pp. 7, 13, 14. This article gives a complete list of suits in equity brought by the Attorney-General under the Sherman Act up to January 1, 1909.

¹ Robert L. Raymond in *Harvard Law Review*, vol. xxiii, p. 373. See *United States v. E. C. Knight Company*, 156 U.S. 1; *United States v. Trans-Missouri Freight Association*, 166 U.S. 390; *United States v. Joint Traffic Association*, 171 U.S. 505; *Hopkins v. United States*, 171 U.S. 578; *Anderson v. United States*, 171 U.S. 604; *Addyston Pipe & Steel Co. v. United States*, 175 U.S. 21; *Montague v. Lowry*, 193 U.S. 38; *Northern Securities Co. v. United States*, 193 U.S. 197; *Swift v. United States*, 196 U.S. 375; *Harriman v. Northern Securities Co.*, 197 U.S. 244; *Board of Trade of Chicago v. Christie Grain & Stock Co.*, 198 U.S. 236; *Loewe v. Lawlor*, 208 U.S. 274; *Continental Wall Paper Co. v. Voight & Sons*, 212 U.S. 227; *American Banana Co. v. United Fruit Co.*, 213 U.S. 347. The Sherman Law never has been interpreted by the Supreme Court as regards foreign commerce. (*Public Service Regulation and Federal Trade Reporter*, January 1, 1915, p. 12.)

² See *Congressional Record*, vol. xxi, part 4, pp. 3146, 3148.

³ See William F. Dana in *Harvard Law Review*, vol. xvi, pp. 179, 180.

insisting on the old common-law meaning, that is, unreasonable restraints.¹

The above interpretation could not last. It made illegal every combination directly restraining interstate commerce, whether such restraint was reasonable or unreasonable. It made practically every business man in the United States liable to criminal prosecution. If strictly and universally enforced, which it was not and could not be, it would have brought the business of the United States as a whole to a standstill.²

This interpretation could not last

In later decisions of the Supreme Court, the law in substance if not in words was changed. These decisions were in the famous Standard Oil and American Tobacco cases.³ In these cases, the court held: —

New interpretation in the Standard Oil and American Tobacco cases

- (1) That the Anti-Trust Act prohibited unreasonable or undue restraint of interstate trade or attempts to monopolize the same in any and every form.
- (2) That trade is unduly restrained (a) by agreements which lessen competition among those agreeing to an extent which reasonably may be thought to injure the competing or consuming public; (b) by acts, combinations, or mere conditions of existence which represent a purpose to acquire monopoly control.
- (3) That the Standard Oil Company of New Jersey and the American Tobacco Company, as shown conclusively by the purposes and results of their conduct, were engaged both in unreasonable or undue restraints of interstate trade and also in attempts to monopolize the same; that therefore they were illegal under both the first and second sections of the Sherman Act.⁴

In these decisions the Supreme Court practically reestablished the common-law rule in regard to restraint of trade.

In reaching this conclusion, the court took as the principal test

¹ See White, J., in *United States v. Trans-Missouri Freight Association*, 166 U.S. 290; Brewer, J., in *Northern Securities Co. v. United States*, 193 U.S. 197.

² See J. H. Benton, from *Yale Law Journal*, March, 1909, p. 15. According to Charles R. Van Hise, the early interpretation of the Sherman Act took us back to the principles which prevailed in England from the Middle Ages to 1844. (*Public Service Regulation*, February 15, 1915, p. 99.)

³ *Standard Oil Company of New Jersey v. United States*, 221 U.S. 1 (1911); *United States v. American Tobacco Company*, 221 U.S. 106 (1911).

⁴ See Robert L. Raymond in *Harvard Law Review*, vol. xxv, pp. 35-36, and in *Journal of Political Economy*, vol. xx, p. 316.

of illegality the injury of the competing or consuming public. It held that interference with the right of others to trade was an undue restraint; it considered that oppression of the public and the use of unfair methods of competition constituted attempts at monopoly. In the American Tobacco case, the court distinctly stated that it did not base its decision (1) on mere size, (2) on the mere fact of combination, (3) on the mere extent of control over the trade. In both cases the court took its stand on the broad ground: "Is this a case where the general public is injured?" The subject of attack was not the principle of combination, but monopoly control and unfair methods.¹

The evidence in the Standard Oil case showed that the company had received from railroads rebates and discriminations; that it had made contracts in restraint of trade; that it had indulged in local price-cutting, in spying on competitors, and in the operation of bogus independent companies.² The evidence in the American Tobacco case showed that the company paid for competing concerns prices entirely out of proportion to actual valuations; that in many cases it abandoned and dismantled plants purchased; that in practically every case of purchase of a competing concern it forced an agreement from that concern not to engage in the tobacco business for a long term of years; that it lowered at times the price of its product below cost to kill off competition; and that generally it engaged in competition of a sort which resulted in driving others out of business or compelling them to enter the combination. The methods by which the combination was brought about and control maintained were secretive and misleading, showing a conscious wrongdoing with intent to obtain mastery.³

The Standard Oil and American Tobacco decisions brought the interpretation of the Sherman Anti-Trust Act to a practicable and intelligent basis. They were in every sense of the word "reasonable" decisions. They permitted combinations formed to secure the

¹ *Harvard Law Review*, vol. xxv, pp. 35-53. For the announcement of similar principles, see the recent decision of the English Lord Chancellor in the Salt Monopoly case. (*Public Service Regulation*, February 15, 1915, p. 102.)

² *Harvard Law Review*, vol. xxv, p. 35.

³ *Ibid.*, pp. 46, 49.

economic benefits of size or to save the wastes of competition, but they refused to permit combinations formed to secure monopoly control — that is, formed to do as the combinations pleased with production, wages, and prices. They refused to permit such combinations by refusing to permit unfair methods.

Combinations formed and capitalized on the basis of monopoly control cannot endure if competition is given a fair chance. They are inherently unsound. Such combinations owe their success, perhaps even their existence, to the ability to interfere with the rights of outsiders — in other words, to the use of unfair methods of competition. To pay dividends on a capitalization representing monopoly control, a combination must lower wages or raise prices. The truth of this will be shown when we take up later in this chapter certain industrial failures. These failures, where they were not due to inefficient management, were due to inability to maintain monopoly control in the face of actual or potential competition. To make potential competition effective is the basis of a true solution of the trust problem.¹

If given a fair chance competition will defeat monopoly control

Potential competition may be made effective: (1) By giving alien capital a chance to know all the facts — that is, by publicity; (2) by insisting that combinations shall fight competition by fair methods only; (3) by preventing the abuse of monopoly during the period necessary for potential competition to become actual competition — that is, by some form of government inspection or supervision.² These conditions will enable outsiders to compete.

Conditions under which potential competition may be made effective

This solution of the problem has been attempted recently in the passage by Congress of two laws:³

- (1) "An Act to supplement existing laws against unlawful restraints and monopolies and for other purposes"; approved October 15, 1914, and commonly known as the "Clayton Anti-Trust Act."
- (2) "An Act to create a Federal Trade Commission, to define its

Enactment of the Clayton and Federal Trade Commission Laws

¹ *Harvard Law Review*, vol. xxv, p. 56; *Ibid.*, vol. xvi, pp. 88-93; and Dewing, *Corporate Promotions and Reorganizations*, p. 558.

² *Harvard Law Review*, vol. xvi, pp. 88-93.

³ *Acts of 63d Congress, 1913-14, Stats. L.*, part 1, p. 730, and *Acts of 63d Congress, 1913-14, Stats. L.*, part 1, p. 717.

powers and duties, and for other purposes"; approved September 26, 1914.

These two laws were considered in connection with each other.

Leading provisions of the Clayton Anti-Trust Law

The leading provisions applicable to industrial concerns of the Clayton Anti-Trust Act are as follows:—

Section 2. That it shall be unlawful for any person engaged in commerce,¹ in the course of such commerce, either directly or indirectly to discriminate in price between different purchasers of commodities, which commodities are sold for use, consumption, or resale within the United States or any Territory thereof or the District of Columbia or any insular possession or other place under the jurisdiction of the United States, where the effect of such discrimination may be to substantially lessen competition or tend to create a monopoly in any line of commerce: *Provided*, That nothing herein contained shall prevent discrimination in prices between purchasers of commodities on account of differences in the grade, quality, or quantity of the commodity sold, or that makes only due allowance for difference in the cost of selling or transportation, or discrimination in price in the same or different communities made in good faith to meet competition: *And provided further*, That nothing herein contained shall prevent persons engaged in selling goods, wares, or merchandise in commerce from selecting their own customers in bona fide transactions and not in restraint of trade.

Section 3. That it shall be unlawful for any person engaged in commerce, in the course of such commerce, to lease or make a sale or contract for sale of goods, wares, merchandise, machinery, supplies or other commodities, whether patented or unpatented, for use, consumption or resale within the United States or any Territory thereof or the District of Columbia or any insular possession or other place under the jurisdiction of the United States, or fix a price charged therefor, or discount from, or rebate upon, such price, on the condition, agreement or understanding that the lessee or purchaser thereof shall not use or deal in the goods, wares, merchandise, machinery, supplies or other commodities of a competitor or competitors of the lessor or seller, where the effect of such lease, sale, or contract for sale or such condition, agreement or understanding may be to substantially lessen competition or tend to create a monopoly in any line of commerce.

Section 7. That no corporation engaged in commerce shall acquire, directly or indirectly, the whole or any part of the stock or other share capital of another corporation engaged also in commerce where the effect of such acquisition may be to substantially lessen competition between

¹ Meaning interstate or foreign commerce.

the corporation whose stock is so acquired and the corporation making the acquisition, or to restrain such commerce in any section or community, or tend to create a monopoly of any line of commerce.

No corporation shall acquire, directly or indirectly, the whole or any part of the stock or other share capital of two or more corporations engaged in commerce where the effect of such acquisition, or the use of such stock by the voting or granting of proxies or otherwise, may be to substantially lessen competition between such corporations, or any of them, whose stock or other share capital is so acquired, or to restrain such commerce in any section or community, or tend to create a monopoly of any line of commerce. . . .

Section 8. That from and after two years from the date of the approval of this Act no person at the same time shall be a director in any two or more corporations, any one of which has capital, surplus, and undivided profits aggregating more than \$1,000,000, engaged in whole or in part in commerce . . . if such corporations are or shall have been theretofore, by virtue of their business and location of operation, competitors, so that the elimination of competition by agreement between them would constitute a violation of any of the provisions of any of the Anti-Trust Laws.¹

These provisions are the gist of the law.

Other important sections applicable to industrial concerns are: one providing that any violation of the penal provisions of the Anti-Trust Laws by a corporation shall be deemed also a crime of the individual directors, officers, or agents who have authorized such violation;² one providing that any person, firm, corporation, or association shall be entitled to sue for and have injunctive relief against threatened loss or damage through a violation of the Anti-Trust Laws;³ and one vesting authority to enforce sections 2, 3, 7, and 8, in so far as they are applicable to industrial concerns, in the Federal Trade Commission subject to review by the courts.⁴

Other important provisions applicable to industrial concerns

The Clayton Anti-Trust Act does not do away with any part of the Sherman Anti-Trust Law of 1890. It amplifies and supplements that law. In the opinion of ex-President Taft, it does not, with the possible exception of the so-called tying provision in the sale of patented articles, enlarge

Clayton Act amplifies and supplements the Sherman Act

¹ The Anti-Trust Laws in the meaning of this act are: The Sherman Act, portions of the Wilson Tariff as amended, and the Clayton Act.

² Section 14.

³ Section 16.

⁴ Section 11.

the field of illegal and criminal effort in respect to restraints of interstate commerce or monopolies. In other words, all the leading prohibitions concerning restraints of trade in the Clayton Act — (1) discriminations in price in sales of goods, (2) sale of goods patented or unpatented on condition that the purchaser shall not deal in or use the goods of a competitor, (3) acquisition of stock by one corporation in another, and (4) acquisition of stock by one corporation in two other corporations, when the effect of any one of these four acts may be substantially to lessen competition, restrain interstate commerce, or tend to create a monopoly — with the possible exception above noted, were covered by the Sherman Act as interpreted by the Supreme Court. The new law is therefore chiefly declaratory.¹ It has been pointed out, however, by ex-Attorney-General Wickersham that the meaning of the phrase, "to substantially lessen competition," used in sections 2, 3, and 7 of the Clayton Act, remains to be interpreted by the courts, just as the phrase, "restraint of trade," in the Sherman Act has been interpreted.²

The Clayton Act expressly exempts from the prohibitions against price discriminations and tying contracts, goods not intended for "use, consumption, or resale within the United States" — in other words, exports.³ The Sherman Act does not do so, but makes illegal every contract or combination in restraint of trade "among the several States or with foreign nations."⁴ It has been thought desirable that groups of American manufacturers should be permitted to join together (1) in the maintenance of joint exhibits of their products in foreign markets; (2) in conducting coöperative sales campaigns; and (3) in pooling expenses and dividing profits.⁵ How this will be worked out remains to be seen.

The prohibitions against stock ownership in competing corporations apply only to ownership by a corporation. There is nothing to prevent the ownership by one or more individuals of all or any part of the stock of competing corporations.⁶

Clayton Act
and Sherman
Act in regard
to exports

Holding
companies

¹ *Public Service Regulation*, November 1, 1914, pp. 612-13.

² *Ibid.*, January 15, 1915, p. 37.

³ Sections 2 and 3.

⁴ Section 1.

⁵ *Federal Trade Reporter*, March 15, 1915, p. 174.

⁶ See Rush C. Butler and Cornelius Lynde, *The Federal Trade Commission and the*

The prohibition of interlocking in the case of industrial corporations applies not to officers or employees, but only to directors. Opinions have been advanced for and against the wisdom of this prohibition. Mr. James J. Hill thinks ^{Interlocking directorates} the prohibition ridiculous because it "can produce nothing but a crop of dummy directors."¹ The ideal situation would be prevention, not of interlocking directors in all cases, but of the abuse of their power. A man should not act as buyer and seller in the same transaction; but he should be allowed to give the benefit of his broad experience in certain cases to more than one board of directors. The only solution of this problem is a sense of honor on the part of the director, enforced, perhaps, by public opinion.

The personal-guilt clause of the Clayton Act ^{Personal-guilt clause} relates to the penal provisions of the Anti-Trust Laws. It fastens guilt for the illegal act of the corporation on the individual directors, officers, or agents of the corporation. It proceeds on the theory that to stop "joy-riding" it is necessary "to arrest the chauffeur and not the automobile."²

The right of injunctive relief granted by the Clayton Act to any person, firm, corporation, or association, against threatened loss or damage by a violation of anything in the Anti-Trust Laws, is a right hitherto held only by the Govern- ^{Machinery of enforcement} ment.⁴ In many other ways, also, the enforcement of the Anti-Trust Laws is made more efficient. The benefit of a decree in a government suit accrues to private litigants, and the time consumed in the government suit is added to the regular period of three years in determining the time in which a suit may be brought for the recovery of damages. As in the Sherman Law, any individual, corporation, or association injured in his business or property by reason of anything forbidden in the Anti-Trust Laws may sue for

Regulation of Business under the Federal Trade Commission and Clayton Laws (Chicago, 1915), pp. 11-13. In the opinion of Francis Lynde Stetson, holding companies should be permitted, but minority stockholders should be protected. (*Atlantic Monthly*, vol. CX, p. 40.)

¹ *Federal Trade Reporter*, March 1, 1915, p. 139.

² Section 14.

³ Statement of President Wilson as quoted in the *Boston Evening Transcript*, January 14, 1914.

⁴ See *State of Minnesota v. Northern Securities Company et al.*, 194 U.S. 48, and *National Fire-Proofing Co. v. Mason Builders' Association*, 169 Fed. Rep. 259.

and recover threefold damages and costs.¹ The Government, as under the Sherman Law, may proceed in equity to prevent and restrain violations of the Anti-Trust Laws.²

In a general way, the Clayton Act is part of the legislation intended to eliminate the so-called "twilight zone" of legality and illegality. Some people think that in so far as it prohibits certain definite practices it weakens the Sherman Law.³ The practices prohibited, however, have been for many years familiar to business men and have come up again and again in the courts. It is to be noted that no practice is prohibited in sections 2, 3, and 7 of the Clayton Act, unless the practice shall have the effect of substantially lessening competition, restraining interstate or foreign commerce, or tending to create a monopoly. In the last resort, the law in its terms gives to the Circuit Court of Appeals and the Supreme Court the discretion which the Supreme Court took for itself in interpreting the Sherman Act.

Passed at practically the same time as the Clayton Act, and considered in connection with it, is the Federal Trade Commission Law. This law creates a commission composed of five men appointed by the President of the United States by and with the advice and consent of the Senate. Not more than three of the commissioners shall be members of the same political party. The term of office of each commissioner ultimately shall be seven years; but provision is made for the term of one commissioner to mature each year. Each commissioner shall receive a salary of \$10,000 a year. The Commission shall have authority to employ and fix the compensation of such attorneys, special experts, examiners, clerks, and other employees as it may from time to time find necessary for the proper performance of its duties and as may be appropriated for by Congress. The Commission shall succeed the Bureau of Corporations.⁴

The Commission is empowered and directed to prevent persons, partnerships, or corporations, except banks and common carriers, from using unfair methods of competition in interstate or foreign commerce. The law says: "That unfair methods of competition in commerce are hereby

Summary of the
Clayton Act

Federal Trade
Commission
Act

Prevention of
unfair methods
of competition

¹ Section 4.

² Section 5.

³ See *Annalist* (New York), April 20, 1914, pp. 488-89.

⁴ Sections 1, 2, and 3.

declared unlawful.”¹ Whenever the Commission shall have reason to believe that any person, partnership, or corporation has been or is using any unfair method of competition in interstate or foreign commerce, and if it shall appear to the Commission that a proceeding by it in respect thereof would be to the interest of the public, it shall issue and serve upon such person, partnership, or corporation a complaint stating its charges in that respect, and containing a notice of a hearing upon a day and at a place therein fixed at least thirty days after the service of said complaint. Any person, partnership, or corporation may make application and, upon good cause shown, may be allowed by the Commission to intervene and appear in said proceeding by counsel or in person. If, upon such hearing, the Commission shall be of the opinion that the method of competition in question is prohibited by this act, it shall make a report in writing in which it shall state its findings as to the facts, and shall issue and cause to be served on such person, partnership, or corporation an order requiring him or it to cease and desist from using such methods of competition. Until a transcript of the record in such hearing shall have been filed in a United States Circuit Court of Appeals, the Commission may at any time modify or set aside, in whole or in part, any report or any order made or issued by it under this section.² The Commission may apply to the United States Circuit Court of Appeals for the enforcement of its order, and any party ordered by the Commission to cease from unfair methods of competition may obtain a review of such order in the same court. The findings of the Commission as to the facts, if supported by testimony, shall be conclusive. The court may order additional evidence taken before the Commission. The court shall have power to make and enter a decree affirming, modifying, or setting aside the order of the Commission. The jurisdiction of the Circuit Court of Appeals in this respect shall be exclusive and the judgment and decree of this court shall be final — except that the same shall be subject to review by the Supreme Court upon *certiorari*.

The Commission also shall have authority:—

- (1) To enforce, in so far as they are applicable to industrial concerns, sections 2, 3, 7, and 8 of the Clayton Law.

Other powers
and duties
of the Trade
Commission

¹ Section 5.

² Section 5.

- (2) To investigate the organization, business, conduct, practices, and management of any corporation, excepting banks and common carriers, engaged in interstate or foreign commerce and its relation to other corporations and to individuals, associations and partnerships.
- (3) To require corporations engaged in interstate or foreign commerce, except banks and common carriers, to file with the Commission annual or special reports or answers in writing to specific questions.
- (4) To investigate, on its own initiative, the manner in which any final decree against a corporation to prevent and restrain any violation of the Anti-Trust Acts has been or is being carried out.¹
- (5) Upon the direction of the President or either House of Congress, to investigate and report the facts relating to any alleged violation of the Anti-Trust Acts by any corporation.
- (6) Upon the application of the Attorney-General, to investigate and make recommendations for the readjustment of the business of any corporation alleged to be violating the Anti-Trust Acts in order that the corporation may thereafter maintain its organization, management, and conduct of business in accordance with law.
- (7) To make public from time to time such portions of the information obtained by it hereunder, except trade secrets and names of customers, as it shall deem expedient in the public interest; and to make annual and special reports to the Congress and to submit therewith recommendations for additional legislation; and to provide for the publication of its reports and decisions in such form and manner as may be best adapted for public information and use.
- (8) From time to time to classify corporations and to make rules and regulations for the purpose of carrying out the provisions of this act.
- (9) To investigate, from time to time, trade conditions in and with foreign countries where associations, combinations, or practices of manufacturers, merchants, or traders, or other conditions, may affect the foreign trade of the United States, and to report to Congress thereon, with such recommendations as it deems advisable.²
- (10) To act as a master in chancery in any suit in equity brought by the Attorney-General as provided in the Anti-Trust Acts.³

¹ On the application of the Attorney-General, it must make such investigation.

² Section 6. Some people think that this section gives the Trade Commission authority to act as a tariff board.

³ Section 7.

- (11) To obtain, on the direction of the President, information relative to any corporation subject to this act from the several departments and bureaus of the Government and a detail of such officials and employees as he may direct.¹
- (12) To have access to, for the purpose of examination, and the right to copy any documentary evidence of any corporation being investigated or proceeded against; and to require the attendance and testimony of witnesses and the production of all such documentary evidence relating to any matter under investigation.²

Upon the application of the Attorney-General of the United States, at the request of the Commission, the district courts of the United States shall have jurisdiction to issue writs of mandamus commanding any person or corporation to comply with the provisions of this act or any order of the Commission made in pursuance thereof.³

These, with the prohibition of unfair methods of competition, are the leading provisions of the Federal Trade Commission Act.

The Federal Trade Commission Act, in addition to furnishing machinery for the enforcement of the Sherman and Clayton Acts, itself sets up a new legislative standard — “unfair ^{Unfair methods of competition} methods of competition.” The question of what are unfair methods of competition, while not defined in the law,⁴ is understood in a general way in business practice. The framers of the law decided that to attempt to define or enumerate unfair methods of competition in advance would be to leave open opportunities for evasion and thereby weaken the law. For if only certain practices are prohibited, the ingenuity of man will invent new ones which may be just as unfair. Mr. Stevens, of the faculty of Political Science of Columbia University, has classified unfair methods of competition as follows: Local price-cutting; operation of bogus “independent” concerns; maintenance of “fighting ships” and “fighting brands”; lease, sale, purchase, or use of certain articles as a condition of the lease, sale, purchase, or use of other required articles; exclusive sales and purchase arrangements; rebates and preferential contracts; acquisition of exclusive or dominant control

¹ Section 8.

² Section 9.

³ *Ibid.*

⁴ “Unfair competition” has a definite meaning in law — the passing-off of one’s goods as those of another. *Rathbone, Sard & Co. v. Champion Steel Range Co.*, 189 Fed. Rep. 26, 31; 37 L.R.A. (N.S.) 258; *W. R. Lynn Shoe Co. v. Auburn-Lynn Shoe Co.*, 100 Me. 461; 62 Atl. 499, 505; 4 L.R.A. (N.S.) 960.

of machinery or goods used in the manufacturing process; manipulation, blacklists, boycotts, whitelists; espionage and use of detectives, coercion, threats, and intimidation.¹ Such methods as the above, Congress evidently intended to prevent in declaring unfair methods of competition unlawful. In general, it intended apparently to prevent those methods regarded in good business usage as unfair and particularly those methods likely to lead to monopoly — or, to make a still broader generalization, to prevent those methods of competition harmful to the public.² The meaning of the phrase, however, will have to be interpreted in specific cases by the Commission and the courts.³

The new Federal Trade Commission has been compared by ex-President Taft and others with the Interstate Commerce Commission. There are many points of resemblance. As the Interstate Commerce Law declares undue discrimination and unreasonable rates unlawful, so the Trade Commission Law declares unfair methods of competition unlawful. As the former creates a commission to determine what rates are unduly discriminating and unreasonable, so the latter creates one to determine what are unfair methods of competition. Equally inquisitorial powers are conferred on the two commissions, and similar processes and hearings are provided in case of alleged violation of the law on the complaint of any one or on the Commission's own initiative. The Interstate Commerce Commission, however, has a wider discretion, free from review by the courts, than has the Trade Commission. The Commerce Commission not only finds the facts, but exercises in detail the legislative function of Congress in regulating rates. All that the courts do in review of action by the Commerce Commission is to see that it is within the scope and limitations of the general delega-

Comparison of
Federal Trade
Commission
with Interstate
Commerce
Commission

¹ *Annalist* (New York), October 26, 1914, p. 340.

² President Taft considers unfair methods of competition to include only those methods and practices the effect and intent of which will bring them within the scope and condemnation of the first and second sections of the Sherman Act. (*Public Service Regulation*, November 1, 1914, p. 612.)

³ According to the terms of the law, unfair methods of competition are forbidden to all persons, partnerships, and corporations, except banks and common carriers, engaged in interstate or foreign commerce (see Section 5). For a discussion of the treatment of unfair methods of competition in England, France, Germany, and other countries see H. D. Nims in the *Outlook*, February 7, 1914, p. 310.

tion of power and that it does not deprive the carrier of its property without due process of law — in other words, that it does not confiscate. The function of the Trade Commission also is to find the facts, but the final decision as to what are fair or unfair methods of competition will rest with the courts.¹

Ex-President Taft also has compared the functions of the Trade Commission in preventing unfair methods of competition with the action of a master in chancery. Like a master, the Trade Commission finds the facts; but unlike a master, the decision of the Trade Commission as to the facts, if supported by legal evidence, is final, whereas the decision of a master in chancery as to the facts can be reversed, if it is contrary to the "weight of evidence."²

Comparison of certain functions of the Trade Commission with the action of a Master in Chancery

In general, the new Federal Trade Commission has been created to carry on the work of the Bureau of Corporations in investigations and also to furnish a convenient machinery for enforcing the Sherman and Clayton Anti-Trust Laws and the prohibition in the Trade Commission Act against unfair methods of competition. It is a body evidently intended to use discretion. Its powers are of three sorts: (1) Inquisitorial; (2) administrative; (3) quasi-judicial. It can investigate, except as to financial condition, all corporations engaged in interstate or foreign commerce and the relation of such corporations to private individuals, firms, and associations. It can classify corporations and ask for information or reports from certain classes and not ask for such information or reports from other classes. In other words, it can reduce its investigations to a workable and discretionary basis. In exercising its administrative functions, it must force compliance with the terms of the Clayton Act and probably of the Sherman Act. In the matter, however, of filing a complaint in connection with the use of unfair methods of competition according to the Trade Commission Act, the Commission is left the discretion of bringing an action only in cases where it shall appear to the Commission that such action will be in the interest of the public. This is, of course, a very broad discretion. The quasi-judicial functions of the Commission enable it to act in corrective

General powers and functions of the Trade Commission

¹ *Public Service Regulation*, November 1, 1914, p. 613.

² *Ibid.*

processes in aid of the courts, in establishing unfair methods of competition, in providing for the readjustment and reorganization of corporations under decrees of the courts and in entering consent decrees in connection with the Department of Justice.

The Trade Commission and the Department of Justice undoubtedly will act in coöperation in enforcing the Anti-Trust Laws.

Relation between the Federal Trade Commission and the Department of Justice

Either the Commission or the Attorney-General's office can act independently, of course, in a large field.

It has been suggested by the Attorney-General's office that probably the principal work of enforcing the

Sherman Act will continue to be done by the Department

of Justice, whereas the Trade Commission will act largely under the Clayton Law and the prohibition in the Trade Commission Law against unfair methods of competition. The Department of Justice undoubtedly will seek the views of the Trade Commission regarding dissolution decrees against corporations adjudged to be monopolies. It will also undoubtedly turn over to the Commission a large number of voluntary complaints that have been sent in during the past few years alleging "unfair" practices, but which do not charge or tend to prove the existence of monopoly. The Attorney-General's office takes the position that, where coöperation with the Trade Commission is not ordered by law, such coöperation will depend entirely on the discretion of the Attorney-General.¹

A most important feature of the Trade Commission Act is the provision for publicity. The Commission can, if it chooses, hold

Publicity features of the Trade Commission Act

open hearings, and it can make public, except trade secrets and the names of customers, any information which it sees fit. This publicity, it has been pointed

out, should have three effects: (1) Where excessive profits by corporations are shown, competition will be encouraged to enter the field — that is, potential competition will become actual competition; (2) labor will be in a position to understand whether or not it is being properly paid; and (3) investors will be enlightened as to the value of their securities.² In general, the publicity features of the Trade Commission Law are among its most important provisions. If taken advantage of intelligently and in the proper spirit,

¹ *Federal Trade Reporter*, April 1, 1915, pp. 207-08.

² *Ibid.*, March 1, 1915, p. 157.

they will go far toward bringing about a solution of the so-called trust problem and toward enabling investors to appraise the securities of any given corporation in their true light.

Chairman Davies, of the new Federal Trade Commission, in all his public utterances lays stress on the fact that the Trade Commission Law will be interpreted not in terms of menace, but in terms of constructive helpfulness. He calls attention to the fact that the Commission gradually will come into possession of a vast amount of correlated information in regard to the industries and business of the country and that this information, except trade secrets and names of customers, will be available to Congress and the people. He calls attention also to the fact that the Commission will be in a position to settle a great many difficulties without litigation. He refers to the power of the Commission to stop unfair methods of competition as the power which will kill monopoly in the seed or cut it off at the roots. For the greatest menace, he says, to the 296,000-odd small corporations in this country is the unfair methods of competition used by the comparatively small number of large corporations. The Trade Commission will be in a position, like the Interstate Commerce Commission, to give continuous administrative action; the Department of Justice can deal only with violations of law. Mr. Davies considers the Trade Commission the greatest safeguard since the Sherman Law for preserving the independence of small concerns and keeping open the channels of trade. If his ideas are followed, the Commission's principal work will be to bring business into harmony with the law. He hopes that its work will result in a new era of good feeling.¹

Policy of the Trade Commission as outlined by Chairman Davies

One of the leading framers of the law feels that as time goes on the corrective work of the Commission will diminish and its constructive work will increase.² Business gradually will become adjusted to the rulings of the Commission and the courts, and business men will set their houses in order. The Commission has the power to investigate conditions in foreign countries and to make recommendations

Trade Commission in a position to do constructive work

¹ See *Public Service Regulation*, January 1, 1915, pp. 6-7; *ibid.*, January 15, 1915, pp. 39-42; *Federal Trade Reporter*, March 1, 1915, pp. 134-36; *ibid.*, April 1, 1915, pp. 195-96; *Commercial and Financial Chronicle*, vol. 100, p. 1551.

² Senator Newlands, as quoted in *Public Service Regulation*, February 1, 1915, p. 70.

which will aid in the development of our foreign trade. It is in a position to make rulings and suggestions which may be of immense benefit to general business. At the same time, according to its declared intention, the Commission will not act as a board of advice to business men in entering on any given programme.¹ It will not and should not place itself in a position to approve in advance any given act. As one writer has put it, the board should not be a body of men to which business men can run and ask questions.² At the same time the commissioners, according to their own statement, will discuss informally with business men various phases of their business.³ The whole atmosphere surrounding the enactment of the Trade Commission Act, unlike that which prevailed at the time of the passage of the Interstate Commerce Law, is constructive and helpful.⁴

There are certain precedents applicable to a greater or less degree for the creation of the Federal Trade Commission. In Canada, the judicial processes have been supplemented by a procedure which, upon complaint of persons injured, permits the question of attempted monopolies to be investigated by a temporary commission appointed by the court. In Australia, in 1912, there was created an Interstate Trade Commission with a character of permanency and of expert qualifications and with broad powers to investigate conditions and enforce the laws regarding competition.

Until the enactment of the Trade Commission Law in the United States, the governmental machinery for the prevention of monopoly has been investigation by general legislative commission or administrative officers and the instituting of court proceedings by the Department of Justice.⁵ The new act substitutes for what has been called regulation by lawsuit⁶ regulation by a continuous administrative body.

Precedents and analogies for the Federal Trade Commission

New act substitutes regulation by Commission for regulation by lawsuit

¹ *Federal Trade Reporter*, April 1, 1915, p. 196.

² R. L. Raymond in the *Journal of Political Economy*, vol. 20, p. 324.

³ See the *Analyst* (New York), April 26, 1915, p. 405.

⁴ Since the passage of the law the United States Chamber of Commerce has appointed a committee to coöperate with the Trade Commission.

⁵ Commissioner Davies, as quoted in the *Boston Evening Transcript*, February 4, 1915.

⁶ R. L. Raymond in *Journal of Political Economy*, vol. 20, p. 319.

The Trade Commission Law has been criticized adversely on these grounds:—

- (1) The Commission has no authority to make a favorable report or order.
- (2) It is not empowered to recommend any rule of conduct for the future.
- (3) It is not permitted to allow combinations for the development of foreign trade.¹

Certain criticisms of the Trade Commission Law

The last-named power could not be given without amending the Sherman Law. The question of recommending any rule of conduct for the future has been discussed. As to giving the Commission authority to make a favorable report or order, this does not seem to us important. If any investigation is made and the Commission does not make an unfavorable report, the presumption is that the practices complained of are not illegal. Again, under the publicity features of the law, the Commission can give out a great amount of information, if it wishes, which will enhance the reputation and credit of corporations.

On more general grounds, there has been a great deal of adverse as well as much favorable criticism of the Trade Commission Law. Some people, like Senator Sutherland and Robert R. Reed, think that the Commission is clothed with unconstitutional powers. Senator Sutherland speaks of many powers of the Commission as retroactive. He also questions the constitutional right of the Commission to exercise semi-judicial powers over all corporations engaged in interstate and foreign commerce.² Robert R. Reed considers that if Congress has regulative power over all corporations, it has no authority to delegate such power.³ He considers also that there is great danger of the creation and protection of monopoly under a federal bureaucracy.⁴ James J. Hill fears that as time goes on the Federal Trade Commission, like the Interstate Commerce Commission, will constantly be given increased powers and that the authority which it has already over all business is dangerous in

Various adverse criticisms of the Trade Commission Act

¹ See Butler and Lynde, *The Federal Trade Commission*, pp. 43-45.

² See the *Sunday Herald* (Boston), April 18, 1915.

³ *Commercial and Financial Chronicle*, vol. 100, p. 684.

⁴ *Atlantic Monthly*, vol. cv1, p. 260.

the extreme.¹ The law has been criticized also on the ground that ordinary business has not reached the stage of development that the railroads have reached, and that any such rigid control of industry as we have had in the case of railroads would be exceedingly harmful.² Senator Weeks thinks that the Trade Commission Act will place all business in a strait-jacket. He calls attention to the fact that boards are "long, narrow, wooden things."³ The law has also been criticized on the ground that this is a government of laws and not of men.⁴ It is to be remembered that objections of very much the same general character were raised at the time of the passage of the Interstate Commerce Law.

The Federal Trade Commission Act, the Clayton Act, and the Sherman Anti-Trust Law are to be thought of together as embodying all the federal legislation dealing with the trust problem. This legislation has reached, in our opinion, a fairly satisfactory if incomplete stage. The real solution of the trust problem, — vital to investors as well as to the public, — in the opinion of the best judges, is to give fair play for competition and fair play for combination.⁵ In other words, the solution lies in the working-out of economic laws without interference, except in so far as that interference is necessary to prevent unfair practices. The interpretation of the Sherman Law by the Supreme Court in the Standard Oil and American Tobacco cases and the enactment of the Clayton and Trade Commission Laws all point to the fact that the highest court and Congress have come to the conclusion that unfair practices, rather than mere combination, are what should be prevented.⁶

The wisdom of this view will appear still more clearly when we consider the unfortunate history of some of our great combinations. Such combinations do not always have things all their own way, even when they are in a position to use unfair methods. If unfair

¹ *Federal Trade Reporter*, March 1, 1915, p. 139.

² W. L. Clause, as quoted in *Federal Trade Reporter*, March 15, 1915, p. 163.

³ *Federal Trade Reporter*, March 15, 1915, p. 182.

⁴ *Commercial and Financial Chronicle*, vol. 100, p. 684, and *Public Service Regulation*, January 1, 1915, p. 5.

⁵ See *Journal of Political Economy*, vol. 20, p. 318.

⁶ The prohibition against holding companies would seem to modify this statement considerably. At the same time, as stated earlier, there is nothing in the Clayton Law to prevent ownership of two competing corporations by the same individuals.

Solution of the trust problem is to give fair play for competition and fair play for combination

methods are prevented, competition almost certainly will prevent anything like monopoly control. If any corporation attempts to capitalize its control over markets and if it can maintain this control only by unfair methods, all the machinery now exists for bringing such control to an end. From the prohibition of unfair practices, as laid down by decisions of the Supreme Court under the Sherman Law, as laid down in the Clayton Law, and as will be laid down under the interpretation of the Trade Commission Act and through its publicity features, potential competition will be in a position to know all the facts and become actual competition within a reasonable time.

All the machinery now exists for preventing monopoly control

No laws and no government are perfect. Only as the laws are enforced and as the administrative machinery is used by men¹ can it be shown whether they are for good or ill. At the same time there is nothing in the experience of the United States or of other countries to make us think that in the long run the trust legislation, as it exists to-day, will be harmful. It may be very beneficial. If we should assume that the great majority of business men are determined to carry on their business in a dishonorable, unfair, and illegal way, it would undoubtedly be difficult to enforce the anti-trust laws as they exist. If we assume, however, that most business men intend to do somewhere near what is right and that many business men are exceedingly glad of the opportunity to understand more clearly how to conduct their business in accordance with the law, the enforcement of the anti-trust laws and the work of the Trade Commission may be positively constructive and beneficial.

Anti-trust legislation as it exists to-day may prove effective and beneficial

There is one more suggestion that has been made for public control of large industrial units — that is, federal incorporation. Some who suggest this step go so far as to suggest government control of prices² under certain circumstances. Supervision of the issue of securities is almost always a feature of this plan. Until the present body of law has been tried

Federal incorporation

¹ The personnel of the new Trade Commission has been criticized by ex-President Taft and others. The effectiveness of the present Commission's work remains, of course, to be seen. (See *Federal Trade Reporter*, June 15, 1915, p. 362.)

² See William Randolph Hearst in the *Boston American*, January 26, 1914.

out, however, it seems to us hardly necessary to undertake federal incorporation. In general, public control of industrial corporations, owing to the presence of keen competition, should be much less close and much less severe than in the case of steam railroads or of public-service corporations.

It may throw a good deal of light on the actual working-out of the so-called trust problem, especially in its bearing on the safety as a class of industrial bonds, to consider in a general way certain industrial promotions and reorganizations. Dr. Arthur S. Dewing, of Yale University, has published in the Harvard Economic series a very careful and readable book discussing certain typical corporate promotions and reorganizations. We will outline briefly some of the general principles which he considers established and will illustrate these with a few examples.

The purposes of the promotions or consolidations which Professor Dewing considers were mainly two: (1) To realize the economies of large-scale production; and (2) to eliminate competition or obtain monopoly control.¹ Experience showed that often extravagant confidence was placed in the economies of large-scale operation. This was the case with the cordage, malting, asphalt, and ship-building promotions. In these instances the expenses of promotion and other disadvantages more than offset the estimated economies.² In the matter of monopoly control, thirteen combinations showed an average degree of control or average percentage of total production of about fifty-four per cent. In individual cases, the percentage of production ranged from only about seventeen per cent in the case of the National Salt Company to about eighty-five per cent in the case of the Glucose Sugar Refining Company.³ There seemed to be no correspondence between the degree of control and the subsequent success or failure of the business. The two concerns having as large a degree of control as any considered —

¹ Dewing, *Corporate Promotions and Reorganizations*, p. 523.

² *Ibid.*, pp. 4, 537-39.

³ Concerns not reorganized having an unusually large degree of control were the American Tobacco Company in the cigarette business and the American Chicle Company in the chewing-gum business. Each of these concerns controlled about ninety per cent of the American output. (*Ibid.*, p. 525.)

the glucose and asphalt combinations — were stifled within two years.¹

The prospective profits of the combination usually were estimated and the capitalization arrived at on the basis of past earnings — a basis which proved very unreliable. The average earnings turned out to be just two thirds the amount anticipated.²

Failure of earnings to meet estimates

In the matter of capitalization, the average proportion, in the case of fourteen combinations, between tangible assets and total capitalization was about forty per cent. It is interesting to note that the two concerns having the largest percentage of control of any considered — the Glucose Sugar Refining Company and the Asphalt Company of America — each had as small a percentage of tangible assets to total capitalization as any considered.³ This indicates, of course, capitalization of monopoly control.

Proportion between tangible assets and total capitalization

Not the proportion between the tangible assets and the total capitalization, but the form which the capitalization took, proved important in times of difficulty. Issue of bonds or obligations entailing a fixed rate of interest often resulted in trouble in times of general depression or when earnings fluctuated from any cause.⁴

Form of capitalization more important than amount

In the cases of thirty-one reorganizations discussed in Professor Dewing's book as due to financial difficulties, the failures took many forms — ranging from inability to earn even the operating expenses of the business to inability to earn and pay normal wages, normal interest, and normal profit.

Various degrees of failure

Examination of the various failures showed the inadequacy of mere consolidation as a basis for economic efficiency. From a business point of view there were two leading causes of failure: (1) Inability to obtain administrative management capable of handling a large situation; and (2) inability to dominate the industry in the presence of actual or potential competition.⁵

Leading business causes of failure

¹ Dewing, *Corporate Promotions and Reorganizations*, p. 527.

² *Ibid.*, p. 546. The promotion of the American Hide and Leather Company illustrated an extreme case of failure to realize the estimates.

³ *Ibid.*, pp. 531-33.

⁴ *Ibid.*, p. 534.

⁵ *Ibid.*, p. 558.

There were almost always present three sources of competition: (1) Old competitors not absorbed by the combination; (2) old competitors who had sold out; and (3) new competitors attracted by the exorbitant profits promised in promotion circulars.¹

Three sources
of possible
competition

Direct cause
of failure
deflection of
working capital
to payment
of interest and
dividends

In all the failures discussed in Professor Dewing's book, with the possible exception of the American Bicycle Company, the direct cause of failure was the deflection of working capital to the payment of interest and dividends; or, to put it in another way, the placing of bonds on untried industrial enterprises and the lack of conservatism in declaring dividends. In the year before failure or reorganization, eighteen out of twenty-four corporations paid either unearned interest or unearned dividends. The motives for paying unearned dividends usually were: (1) To make a market for the company's securities; (2) to return an income on the holdings of directors. Evidence goes to show that if the assets had been conserved, failure in most cases could have been avoided and a larger ultimate return to security-holders obtained.²

Causes of failure
in certain
individual cases

A brief summary of some of the causes of failure in the cases of certain large industrial concerns may be of interest,³ and will be found in the table on pages 287-88. These are not all the failures discussed in Professor Dewing's book, but they are the leading ones.

Bonding of
industrial concerns
should be
undertaken
with great care

A consideration of the causes of failure in individual cases together with the causes in general discussed earlier leads one to the following conclusions:—

(1) That attempts to capitalize and exercise monopoly control, unless backed up by unfair methods, are futile.⁴

¹ Dewing, *Corporate Promotions and Reorganizations*, p. 563.

² Dewing, pp. 550-51, 557-58.

³ *Ibid.*, pp. 16-17, 24-25, 57-61, 65-70, 79, 83-86, 93-98, 112-13, 123-25, 133, 141, 147, 150-51, 157-59, 164, 166-69, 177-79, 182, 185-86, 197, 203-04, 210-12, 214, 220-21, 225-26, 232, 234, 236-37, 239-42, 248, 249, 259, 263-64, 268, 286-89, 294-96, 304, 318-24, 330-31, 335, 340-43, 346, 354-56, 360, 363-64, 367, 371-72, 374-76, 399, 411-13, 432-33, 437, 441-43, 445, 447, 451, 462-65, 496-99, 508.

⁴ Attempts to exercise monopoly control require usually either (1) maintaining prices on an artificial level by absorbing all the surplus supplies, as the National Cordage Company attempted to do; or (2) cutting prices to kill competition, as the Asphalt Company and the Corn Products Company in its early days tried to do. (Dewing, p. 600.)

BUSINESS FAILURES

<i>Concern</i>	<i>Causes of failure</i>
United States Leather Company	Tanning industry not suited to large-scale production. Small plant investment, but large working capital required. Raw material purchased and finished product sold under conditions of keen competition. General business depression 1893-98. Issue of 8% cumulative preferred stock largely to acquire unproductive timber lands.
National Starch Manufacturing Company	Poor condition of some of the plants. Heavy fixed and contingent charges. Competition. Business depression following the panic of 1893. Mismanagement.
National Starch Company	Increase in fixed charges. Attempt at monopoly control. Mismanagement.
Glucose Sugar Refining Company	Poor condition of plants and inadequate provision for renewals. Overcapitalization. Competition. Mistaken trade policy and unwise dividend policy. Expensive litigation.
Corn Products Company	Capitalization of monopoly control. Adverse trade conditions including vigorous competition. Neglect of depreciation and obsolescence. Unwise payment of dividends. Inefficient management.
National Cordage Company	Capitalization of monopoly control. Payment of large dividends. Neglect of business by officers for speculation in company's securities.
United States Cordage Company	Inadequacy of reorganization of National Cordage Company. Inability to control competition. "Banker" management.
Standard Rope & Twine Company	Keen competition. Lack of single-mindedness on the part of officers.
Standard Cordage Company	Heavy burden of debt. Inefficiently equipped mills.
Westinghouse Electric & Manufacturing Company (two reorganizations)	Lack of conservatism of Mr. Westinghouse. Rapid expansion involving heavy plant investment. Lack of profit in foreign subsidiaries. Lack of working capital. Unconservative dividend policy. Accumulation of large floating debts.
National Salt Company	Attempt at monopoly control. Extravagant contracts. Inability to maintain monopoly prices — due to overproduction and the increase of competition.

BUSINESS FAILURES (*continued*)

<i>Concern</i>	<i>Causes of failure</i>
United States Realty & Construction Company	Overestimate of earning power and overcapitalization. Speculation in land and securities. Difficulties arising from relations with labor. Unsound methods of accounting. Financial depression of 1903.
American Bicycle Company	Passing of the bicycle craze and general collapse of the industry.
Pope Manufacturing Company (1907)	Attempt to manufacture automobiles and consequent necessity for new equipment. Lack of working capital.
American Malting Company	Inability to control competition. Failure to realize economies of large-scale production. Lack of loyalty on the part of officers. Payment of unearned dividends.
New England Cotton Yarn Company (1903)	Incapable management. Unwise trade policy. Increased costs of raw material and labor. Unconservative dividend policy.
Union Mills Company	Difficulty of managing so large an enterprise. Burdensome lease of the New England Cotton Yarn Company.
Mount Vernon-Woodberry Cotton Duck Company United States Cotton Duck Corporation Consolidated Cotton Duck Company International Cotton Mills Corporation	Industry not suited to consolidation. Unwise issue and retention of mortgage bonds. Inability to obtain management able to cope with the situation. Competition. Inadequate charges to depreciation. Attention to market for company's securities to the neglect of the business. Complicated financial structure.
Asphalt Company of America National Asphalt Company	Capitalization of monopoly control. Heavy fixed charges. Development of new process for making asphalt. Interference of Venezuelan Government. Severe competition. Lack of loyalty of higher officers.
United States Shipbuilding Company	Shipbuilding at time of promotion unusually unprofitable. Promotion under conditions of inflation and misrepresentation. Placing of bonded debt on the properties. Financial depression of 1903. Lack of working capital. Unavailability of the earnings of the Bethlehem Steel Company, the only prosperous subsidiary.

- (2) That good management is the most important factor in success.
- (3) That the competitive and fluctuating conditions surrounding industrial enterprises make the bonding of such concerns advisable only under carefully chosen circumstances and carefully guarded restrictions.

To state the problem in another way: Generally speaking, only those concerns organized to prosper under conditions of competition should be bonded, and then only to an amount the fixed charges on which can be met easily in times of depression.¹

Whether bonded or not, the financial structure of an industrial concern should be built with a view to its permanent adaptability to the industry. In order to succeed, the concern must pursue a sound trade policy and a sound financial policy. Some of the most conspicuous successes among industrial concerns are not bonded at all, pursue in general the policy of manufacturing a first-class product and selling it on a small margin of profit or at a reasonable price, and make no attempts at monopoly control. Among such concerns may be mentioned the American Radiator Company, the General Chemical Company,² and the Ford Motor Company.

General conditions necessary to success of industrial concerns

In reorganizations, efforts usually have been made to remedy two sets of conditions: (1) Trade conditions; (2) errors of capitalization. Sometimes the policy has been pursued of attempting to increase control of the market — as in the cases of the National Starch Manufacturing Company, the Glucose Sugar Refining Company, the National Salt Company, and the Asphalt Company of America. As to correcting errors of capitalization, efforts in this direction — as in railroad reorganizations — have been directed principally toward lightening the burden of fixed charges.³

Reorganizations aim to correct trade conditions and errors of capitalization

Industrial reorganizations have been formulated mainly on the theory that the difficulties to be corrected were inherent in the particular concern under consideration rather than due to temporary general conditions —

Capitalization in industrial and in railroad reorganizations

¹ This is without taking into consideration control of patents or of valuable sources of raw material or ownership of real estate referred to earlier in this chapter.

² Dewing, pp. 544, 601-02.

³ *Ibid.*, pp. 602-03.

as has been the case so often in railroad reorganizations. In practically all railroad reorganizations, the total capitalization has been greater after reorganization than before. In thirty-two industrial reorganizations considered by Professor Dewing, on the other hand, the total of new securities has been only eighty-nine per cent of the old. There has been, however, an increase in the proportion of bonds — in which these reorganizations have been markedly unlike the leading railroad reorganizations of 1893 to 1898.¹

In twenty-seven industrial reorganizations, the new fixed charges have been seventy-eight per cent of the old. Frequently the principal of the lien has been increased, but the interest rate on the new bonds has been less than on the old.²

As in railroad reorganizations, where there has been foreclosure, minority bondholders have been paid off in accordance with the foreclosure price. This is almost sure to be much less than the face value of the debt. In the case of the Asphalt reorganization, minority bondholders received only eleven per cent of the par value of their bonds. Bondholders who have gone into reorganizations, whether after foreclosure or not, usually have received new income bonds or preferred stock.³ Sometimes the debt has not been disturbed, as in the case of the United States Leather Company debentures.⁴

We give on page 291 a table showing reorganizations involving sacrifices by bondholders.⁵ An examination of the table shows that in two cases — that of the Standard Rope and Twine Company and that of the National Asphalt Company — there was an assessment on bondholders. The new securities obtained in exchange for old bonds were: in two cases — the United States Cordage Company and the Standard Rope and Twine Company — income bonds; in one case — the National Cordage Company — first preferred stock; in one case —

¹ Dewing, pp. 611-14.

² *Ibid.*, pp. 611-13.

³ *Ibid.*, p. 594.

⁴ *Ibid.*, p. 35. Other usual features of industrial reorganizations have been: Surrender by preferred stockholders of their claim to cumulative dividends and the acceptance of a security bearing a lower rate of income; severe cutting-down of the par value of the holdings of common stockholders; and furnishing of new money either by bankers or by assessment of old security-holders.

⁵ *Ibid.*, p. 594.

REORGANIZATIONS INVOLVING SACRIFICES BY BONDHOLDERS

Reorganizations	Assessment on bondholders		Security given for assessment on bonds	New securities given in exchange for old	Per cent of new securities to old bondholders
	Per cent	Amount			
National Cordage Company:					
United States Cordage Company	..	..	No assessment	1st preferred stock ¹	100
\$6,000,000 old bonds.....	..	..		2d pref. and com. stocks	
25,000,000 old stock.....					
United States Cordage Company:					
Standard Rope & Twine Company	..	..	No assessment	Income bond ¹	100
\$6,750,000 old bonds.....	..	..		Common stock	
34,000,000 old stock.....					
Standard Rope & Twine Company:					
Standard Cordage Company	26 & 5	{ \$719,250	Mortgage bonds ²	Income bond ¹	Various
\$9,545,330 old bonds.....		{ 357,280		Extinguished	
12,000,000 old stock.....					
American Bicycle Company:					
Pope Manufacturing Company	..	..	No assessment	2d preferred stock ¹	100
\$9,150,000 old bonds.....	..	..		Common stock	
27,000,000 old stock.....					
Mt. Vernon-Woodberry Cotton Duck Corporation:					
Consolidated Cotton Duck Corporation	..	..	No assessment	Preferred stock ¹	50
\$6,000,000 old bonds.....					
Asphalt Company of America:					
General Asphalt Company	..	..	No assessment	Preferred stock ²	50
\$20,432,255 old bonds.....					
National Asphalt Company:					
General Asphalt Company	1.6	95,816	Common stock ¹	Common stock ¹	40
\$6,000,000 old bonds.....	..	..		Common stock	
19,555,314 old stock.....					

¹ Security given was not a first lien security.² Security given was a first lien security.

the American Bicycle Company — second preferred stock; in two cases — Mt. Vernon-Woodberry Cotton Duck Corporation and the Asphalt Company of America — preferred stock to the extent of fifty per cent of the old bonds; and in one case — the National Asphalt Company — common stock to the extent of forty per cent of the old bonds.

All industrial reorganizations considered have sought to relieve the accumulated and unmanageable floating debt brought about by the deflection of money from the needs of the business to the payment of interest and dividends. All reorganizations have sought also to improve, when necessary, trade conditions. As a whole, they have sought "to achieve the financial rehabilitation of the corporation along lines leading to permanent success."¹

Summary of
industrial
reorganizations

All the considerations discussed so far in this chapter are of a more or less general nature. In trying to determine the safety of any given industrial bond issue, it is necessary to confine one's attention to the individual property and business and the conditions surrounding it.

Necessary to
consider each
individual bond
issue on its
own merits

Examples of strong industrial bond issues are: American Agricultural Chemical 5% October 1, 1928; General Electric 5% September 1, 1952; Swift & Company 5% July 1, 1944; Western Electric 5% December 31, 1922. The American Agricultural Chemical Company controls a large amount of phosphate rock — a material necessary for the manufacture of commercial fertilizers; owns and operates over fifty plants in various parts of the United States; has a large amount of net quick assets; and has shown its ability to make good net earnings over a long series of years and even in times of general business depression. The General Electric Company controls valuable patents; has an unusually large amount of net quick assets compared with its debt; and has shown its ability to earn even under adverse circumstances many times the interest charges on its bonds. Swift & Company have a plant investment over twice the amount of the mortgage bonds, and must have at all times net quick assets equal at least to the amount of the debt. The Western

Examples of
strong industrial
bonds

¹ Dewing, p. 614.

Electric Company has total assets over four times the amount of its debt, and must always have net quick assets at least double the amount of these bonds outstanding. Many other examples of strong industrial bond issues could be given.

We give below prices on July 3, 1914, or the nearest date, of certain leading industrial bond issues listed on the New York Stock Exchange.¹

Prices of leading industrial bond issues in 1914

PRICES JULY 3, 1914 OF LEADING INDUSTRIAL BONDS —
PRICES "AND INTEREST."

<i>Issue</i>	<i>Price</i>
American Agricultural Chemical 5% 1928.....	100½
American Hide & Leather 6% 1919.....	102½
American Ice Securities 6% 1925.....	89
American Thread 4% 1919.....	94½
American Tobacco 6% 1944.....	121½
American Writing Paper 5% 1919.....	65
Baldwin Locomotive Works 5% 1940.....	103½
Bethlehem Steel 5% 1926.....	99
Central Leather 5% 1925.....	99½
Corn Products Refining 5% 1931.....	94½
Distillers Securities 5% 1927.....	58½
E. I. du Pont Powder 4½% 1936.....	86
General Electric 3½% 1942.....	79
General Motors 6% 1915.....	100½
International Paper 6% 1918.....	99½
International Steam Pump 5% 1929.....	44
New York Air Brake 6% 1928.....	97
Republic Iron & Steel 5% 1934.....	104½
Standard Milling 5% 1930.....	88
The Texas (Oil) 6% 1931.....	102
Union Bag & Paper 5% 1930.....	85½
U. S. Realty & Improvement 5% 1924.....	83½
U. S. Rubber 6% 1918.....	102½
U. S. Steel 5% 1963.....	103
Western Electric 5% 1922.....	101½
Westinghouse Electric & Manufacturing 5% 1931.....	95½

This table indicates the wide variation in degree of safety of different issues. We have here bonds selling all the way from 44 per cent of their par value to 121½ per cent. The "income basis" or net

¹ *Commercial and Financial Chronicle*, vol. 99, p. 35.

return of some of the issues hardly is worth trying to figure; that of some of the highest priced issues — such as American Agricultural Chemical 5 per cents, American Tobacco 6 per cents, Baldwin Locomotive 5 per cents, General Electric $3\frac{1}{2}$ per cents, Republic Iron and Steel 5 per cents, United States Steel 5 per cents, and Western Electric 5 per cents — is less than 5 per cent.

The European War has changed greatly the business and prospects of many of our leading industrial concerns. Those companies receiving orders for munitions and other war supplies have shown a great increase in business. Among these may be mentioned the Bethlehem Steel Corporation, E. I. du Pont de Nemours Powder Company, and the Westinghouse Electric and Manufacturing Company. The bonds of all these companies were selling in July, 1915,¹ at considerably higher prices than they sold in July, 1914.

We have not meant to say in this chapter that all industrial bond issues are less safe than all railroad or public-service issues.

Selection of
industrial bonds
for investment
requires
great care

Throughout this book we have tried to lay stress on the fact that each bond issue of any kind must be judged on its own merits. At the same time we do feel that the conditions surrounding the issue of industrial bonds prompt greater care in the selection of such bonds than do the conditions surrounding any other well-known classes of investment bonds.

¹ See *Commercial and Financial Chronicle*, vol. 101, p. 37.

CONCLUSION

THIS book has been completed in the midst of a period of world-wide upheaval. The relation of peoples to their governments, the trade relations between the great nations of the world, and the relative positions of those nations in the leadership of civilization are in process of change. One fact only, perhaps, is clear even now: that the United States rapidly is attaining a position of power which it never has held before. Not only is the broad basis for the safety of American securities greater than ever before, but the United States is approaching the position of furnishing the leading market for the securities of other nations.

It is hoped that this book has thrown some light on the leading principles governing investment in bonds.

THE END

APPENDIX

COUNTY AND MUNICIPAL DEFAULTS

EARLY PERIOD

ELIZABETH, NEW JERSEY, defaulted interest on its city bonds February 1, 1879. The cause of the default was the spirit of speculation and the desire for local improvements prevailing from 1869 to Elizabeth, 1873. The city loaned its credit liberally for improve- New Jersey
ments, and levied assessments by the linear foot to reimburse itself. In 1875, a court decision held that assessments should be made according to the "present" benefit derived by property-owners from the improvements. As many of the improvements had deteriorated greatly in value, the city thereby was burdened directly with a debt of about \$3,000,000.¹ Later, the city had difficulty in collecting taxes.² Citizens then set up claims of unconstitutionality and illegality in the issue of the bonds. Judgments were obtained, however, by bondholders.³ June 3, 1880, the New Jersey Supreme Court confirmed the judgment of the lower court, upholding the validity of the bonds.⁴ The United States Circuit Court denied a motion for the appointment of a receiver or trustee for the city.⁵ Later the legislature gave authority to Elizabeth to compromise this debt.⁶ At first, fairly liberal terms for the bondholders were suggested.⁷ Elizabeth soon put forward the claim, however, of inability to pay more than fifty cents on a dollar. In 1882, the debt with interest amounted to \$6,700,000, while the total value of the taxable property was only \$12,182,035.⁸ Later, the court issued an order for the city to show cause why it should not pay its debt. A similar previous order had caused five out of eight assessors to resign before the order was served against them.⁹ In July, 1888, a resolution of the City Council was passed authorizing the Mayor, Comptroller, and the Commissioners of the Sinking-Fund to issue 4% adjustment bonds for old obligations of the city at a rate not higher than fifty per cent of their par value and accrued interest.¹⁰

MEMPHIS, TENNESSEE, defaulted interest January 1, 1873.¹¹ In 1877,

¹ *Commercial and Financial Chronicle*, vol. 28, p. 146.

² *Ibid.*, vol. 29, p. 120.

³ *Ibid.*, vol. 29, p. 563.

⁴ *Ibid.*, vol. 35, p. 602.

⁵ *Ibid.*, vol. 29, p. 277.

⁶ *Ibid.*, vol. 32, p. 312.

⁷ *Ibid.*, vol. 39, p. 581.

⁸ *Ibid.*, vol. 30, p. 589.

⁹ *Ibid.*, vol. 32, p. 368.

¹⁰ *Ibid.*, vol. 47, p. 50.

¹¹ Investors' Supplement, *Commercial and Financial Chronicle*, January 26, 1878, p. 10.

the so-called "Flippen" compromise of fifty cents on a dollar of principal and interest in new thirty-year 6% bonds was arranged.¹

Memphis, Tennessee The Mayor of the city, in a message to the City Council a few years before, had referred to the judgment of the United States Circuit Court on certain bonds of the city of Memphis. The Mayor said that for one lot of \$67,000 bonds issued, the city had received only \$17,789.17. It was the duty of the city, said the Mayor, to resist payment beyond "price or sum realized, or the price paid for them by the holder," with the legal rate of interest added. A local newspaper estimated the whole amount of questionable bonds as about \$2,450,000. It claimed that the city never had realized more than an average of forty-two cents on a dollar of this amount — "Say it realized fifty cents, which will answer as probably covering cost of litigation."²

Owing to a yellow-fever epidemic in 1878, the city again was unable to take care of its obligations. A repudiation meeting of citizens was held.³ January 29, 1879, the Tennessee Legislature passed two bills repealing the city charter of Memphis and creating the "Taxing District of Shelby County."⁴ The lower court appointed a receiver for the city,⁵ but this action later was invalidated by the United States Supreme Court.⁶ Later still, the United States Circuit Court at Memphis held the taxing district liable for the old debt of the city.⁷ This old debt, not previously compromised, finally was funded at fifty cents on a dollar into new bonds bearing interest for the first three years, from January 1, 1881, at 3%, for the next three years at 4%, and thereafter at 6%. The lower interest rates were to be capitalized, so as to give the holders 6%. The "Flippen" compromise bonds were exchangeable at par.⁸ Including capitalizations, the settlement was effected at an average rate of 60.53%. From July, 1880, interest on the so-called "Tax District" 4-6 per cents and on the "Flippen" stamped bonds was paid at the rate of 6% per annum.⁹

PITTSBURG, PENNSYLVANIA, after the construction of the Pennsylvania Railroad, wanted more rapid and more direct communication with the West. It subscribed to the capital stock of five railroad companies and issued in payment \$1,800,000 city bonds at 6%. A few years later, owing to general financial disasters, the railway stocks declined in value and paid no dividends. The city, having relied on these dividends, failed to pay the interest on its bonds. Suit was brought, judgment obtained, and the railroad stocks levied on. The city permitted the stocks to be sold at a sacrifice and a large part brought

¹ *Commercial and Financial Chronicle*, vol. 25, p. 114.

² *Ibid.*, vol. 18, p. 526.

³ *Ibid.*, vol. 27, p. 678 and vol. 31, p. 328.

⁴ *Ibid.*, vol. 28, p. 121.

⁵ *Ibid.*, vol. 28, p. 173.

⁶ *Ibid.*, vol. 32, p. 70.

⁷ *Ibid.*, vol. 34, p. 604.

⁸ *Ibid.*, vol. 37, p. 202.

⁹ Investors' Supplement, *Commercial and Financial Chronicle*, July 28, 1888, p. 10.

only ten cents on a dollar. The city later proposed a compromise by which the 6% bonds were exchanged for 4% bonds having fifty years to run. The greater part were exchanged. Some creditors refused to accept and brought suit for interest on the old bonds. The judgments, amounting to over \$500,000, were paid in currency in 1871.¹

Again in 1877, the city defaulted in interest on certain bonds.² The cause of this default was extensive improvements, including newly paved streets. Bonds to pay for these improvements were issued by the city, but were supposed to be paid out of special assessments. The law permitting issue of these special assessment bonds was declared illegal by the Supreme Court of the State.³ In March, 1879, a new loan was subscribed to pay the overdue interest on these Pittsburgh 7 per cents, known as the "Penn Avenue" bonds.⁴

ST. CLAIR COUNTY, MISSOURI, in 1870 issued bonds in aid of the Tebo & Neosho Railway. The proposed railroad never was built, and the taxpayers repudiated the bonds.⁵ Holders of the bonds resorted to the courts over and over again without avail. The State Supreme Court held the county not liable. The United States Circuit Court, however, on the theory that the bondholders were innocent purchasers, ordered a tax levy to pay principal and interest. This amounted, at the time of the decision, to nearly \$900,000, although the issue of bonds was only \$200,000.⁶ The debt had grown to be about one third of the assessed value of the whole county. Members of the County Court persistently refused to make a levy. Several members served jail terms for contempt, and one of the qualifications for office in the county was a willingness to go to jail rather than be a party to the levy.⁷ All the bonds of this county are still in litigation.⁸

St. Clair
County,
Missouri

LATER PERIOD

GALVESTON, TEXAS, defaulted December 1, 1901, in interest due on limited debt bonds of 1881.⁹ The default was due to the great storm of September 8, 1900, in which over 7500 persons were lost and fully as many more left the city to seek employment elsewhere.¹⁰ In the final settlement, there was simply a reduction of

Galveston,
Texas

¹ *Commercial and Financial Chronicle*, vol. 13, p. 242.

² *Ibid.*, vol. 24, p. 519.

³ *Ibid.*, vol. 24, p. 591.

⁴ *Ibid.*, vol. 28, p. 302.

⁵ *Ibid.*, vol. 66, p. 819 and vol. 89, p. 1293.

⁶ *Ibid.*

⁷ *Ibid.*, vol. 89, p. 1293.

⁸ State and City Section, *Commercial and Financial Chronicle*, May 30, 1914, p. 124.

⁹ *Commercial and Financial Chronicle*, vol. 73, p. 1275.

¹⁰ State and City Section, *Commercial and Financial Chronicle*, May 30, 1914, p. 195, and *Commercial and Financial Chronicle*, vol. 71, p. 564.

interest from 5% to 2½% for a period of five years from December 1, 1901.¹ This was agreed to willingly by most of the bondholders.²

MIDDLESBORO, KENTUCKY, was a flourishing town in the early nineties, and was the center of what was considered to be a staple iron and steel manufacturing district. An English syndicate was interested in developing the iron business there, but after many years the quality of the ore ran out and this large English plant was abandoned. Later, other plants moved away, taking with them a great deal of the population. The character of the city changed entirely, and it was not long before the new population began to question the debts settled on it by the old and to demand a readjustment. Interest was defaulted and the matter taken to the courts by bondholders.³ The United States Circuit Court declared the debt valid and binding. An agreement between a bondholders' committee and the city provided as follows: From October 1, 1905, interest was reduced from 6% to 4%, and a lump sum of \$28,000 was agreed on for overdue interest, judgments, etc., to be paid in fourteen annual installments of \$2000 each, beginning on or before December 31, 1907.³

¹ *Commercial and Financial Chronicle*, vol. 74, p. 1102.

² Information received from bankers.

³ *Commercial and Financial Chronicle*, vol. 84, p. 404.

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Pittsburg, Pennsylvania.

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93, p. 301.

[Copy]
THE SUPREME COURT
OF KANSAS

TOPEKA, Nov. 7, 1914.

GOODALE & NASH,
Boston, Mass.

DEAR SIR:—

Answering yours of the 3rd inst. beg to advise that the case you refer to was the case of *Levison vs. Finney*, No. 18934, and was never reported for the reason that the case never came to a final hearing on the matter of levying tax. At the time the application was made for the writ, this court held that it had jurisdiction to require the levy to be made and give the defendant time to answer raising any question it desired as to the validity of the indebtedness; it also restrained the defendant from making any levy for the current year, but did not preclude the levy of a tax for the purpose indicated, subject to change on order of the court.

Yours truly,

D. A. VALENTINE,
Clerk Supreme Court.

RAILROAD LAWS

LAWS FORBIDDING COMBINATION AND CONSOLIDATION

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Minnesota: General Laws, 1907, chap. 395.

Oklahoma: Constitution of Oklahoma, adopted 1907, art. IX, secs. 8, 9.

Pennsylvania: Laws of Pennsylvania, 1907, nos. 254 and 281.

Utah: Laws of Utah, 1907, chap. 93, sec. 6.

LAWS ORDERING CHANGES IN CONSTRUCTION OF ROAD OR ROLLING-STOCK

Illinois: Laws of Illinois, 1907, p. 476 (safety appliances).

Indiana: Acts, 1907, chap. 205 (block signals).

Acts, 1907, chap. 118 (safety appliances).

Kansas: Laws of Kansas, 1905, chap. 346; *ibid.*, 1907, chap. 277.

Michigan: Public Acts, 1907, chap. 312, secs. 13, 34 and 35; *ibid.*, chap. 234 (automatic couplers).

Minnesota: General Laws, 1905, chaps. 208, 280.

General Laws, 1907, chaps. 54, 202, 276, 333, 396.

Missouri: Laws of Missouri, 1905, pp. 100, 106, 107.

Laws of Missouri, 1907, pp. 181, 182 (safety appliances).

Montana: Laws of Montana, 1905, chap. 29; *ibid.*, 1907, chap. 59 (cattle-guards and fences).

Laws of Montana, 1907, chap. 54 (size of cabooses).

New York: Laws of New York, 1907, chap. 208, p. 403 (steam-cocks, etc., on locomotives).

North Dakota: Laws of North Dakota, 1907, chaps. 209, 210, 211.

Ohio: Laws of Ohio, 1906, p. 342, act approved April 16, 1906, sec. 9; *ibid.*, pp. 46, 75.

South Carolina: Acts, 1906, no. 2.

South Dakota: Session Laws, 1907, chap. 212.

Texas: Laws of Texas, 1905, chaps. 56 and 133.

Laws of Texas, 1907, chaps. 32 and 155.

Virginia: Acts of Assembly, 1906, chaps. 298 and 302.

Vermont: Laws of Vermont, 1906, no. 118, secs. 18 and 27; nos. 119 and 120.

Washington: Laws of Washington, 1905, chap. 164, sec. 10 (spark-arresters).

Washington: Laws of Washington, 1907, chap. 138, and chap. 226, secs. 13-14 (safety appliances).

Wisconsin: Laws of Wisconsin, 1905, chap. 264, sec. 17, chap. 348.
Laws of Wisconsin, 1907, chap. 595.

LAWS SHORTENING HOURS OF LABOR

Connecticut: Public Acts, 1907, chap. 242.

Indiana: Acts, 1905, chap. 169, sec. 674.
Acts, 1907, chap. 131.

Iowa: Laws of Iowa, 1907, chap. 163.

Kansas: Laws of Kansas, 1905, chap. 342.
Laws of Kansas, 1907, chap. 280.

Minnesota: General Laws, 1907, chap. 253.

Missouri: Act approved March 25, 1905.
Laws of Missouri, 1905, p. 112.

Montana: Laws of Montana, 1907, chap. 5.

New York: Laws of New York, 1907, chaps. 523 and 627.
Statutes, 1907, chap. 186.

North Carolina: Public Laws, 1907, chap. 456.

North Dakota: Laws of North Dakota, 1907, chap. 207.

Oregon: General Laws, 1905, chap. 143.

South Dakota: Session Laws, 1907, chap. 220.

Texas: General Laws, 1907, chap. 51.

Washington: Laws of Washington, 1907, chap. 20.

West Virginia: Acts, 1907, chap. 59.

Wisconsin: Laws of Wisconsin, 1907, chaps. 575 and 655.

LAWS HELD UNCONSTITUTIONAL

Among railroad regulative laws that have been held to be unconstitutional, the following may be mentioned:—

Laws of Wisconsin, 1907, chap. 266, p. 402: providing that an upper berth in a sleeping-car shall, when unoccupied, be closed at the option of the occupant of the lower berth. *State v. Redmon*, 134 Wis. 89, 114 N.W. 137.

Laws of Alabama, 1907, p. 711: fixing maximum freight and passenger rates on business within the State, and providing that on violation the railroad company and its agents should be liable respectively to penalty and to criminal prosecution, so that a railroad could not test the validity of the statute without risk of bankruptcy. *Central of Georgia Railway Co. et al v. Railroad Commission of Alabama*, 161 Fed. Rep. 925.

Laws of North Dakota, 1907, chap. 199, p. 327: providing for a maximum

passenger rate of two and one half cents per mile and further providing for mileage books at two cents per mile, good for purchaser and such adult members of his family as he may designate. This latter provision was held invalid as being discriminatory. *State v. Great Northern Railway Company*, 17 N.D. 370, 116 N.W. 89.

Laws (Washington), 1905, p. 238, sec. 2: arbitrarily fixing the weight of standards for lumber cars at one thousand pounds, and requiring such weight to be deducted from the net weight of the lumber on all carloads received for shipment, regardless of the actual weight of such standards. *State v. Great Northern Railway Company*, 43 Wash. 658, 86 Pac. 1056.

Acts of Assembly (Virginia), 1906, chap. 256: fixing a maximum rate for mileage books not applicable to passenger fares generally. *Commonwealth v. Atlantic Coast Line Railway Company*, 106 Va. 61, 55 S.E. 572.

Session Laws (Nebraska), 1905, chap. 105, secs. 1 and 6: requiring railroad to build switches at request of owner of elevator and providing no compensation. *Missouri Pacific Railway Company v. Nebraska*, 217 U.S. 196.

Laws (Illinois), 1907, p. 746: fixing maximum passenger fares so low as to involve confiscation. *Trust Company of America v. Chicago Pacific and St. Louis Railway Company*, 199 Fed. Rep. 593.

Acts (West Virginia), 1907, chap. 41: fixing maximum passenger fares so low as to be confiscatory. *Coal and Coke Railway Company v. Conley et al*, 67 W.Va. 129, 67 S.E. 613.

The above are merely typical examples and by no means a complete list of such cases.

NET EARNINGS OF INDUSTRIAL COMPANIES

Name of company	Item	Fiscal years	Per cent of increase or decrease	Fiscal years	Per cent of increase or decrease	Fiscal years	Per cent of increase or decrease
American Agricultural Chemical.....	"Total Income"	June 30, 1903, 1904	+ 4.45	June 30, 1907, 1908	+ .07	June 30, 1913, 1914	+ 46.89
American Can.....	"Earnings" 1	March 31, 1904, 1905	+ 20.98	Dec. 31, 1907, 1908	+ 4.16	Dec. 31, 1913, 1914	- 7.01
American Ice.....	"Gross Earnings"	.....	.....	Oct. 31, 1907, 1908	+ 16.34	Oct. 31, 1913, 1914	- 40.96
American Locomotive.....	"Net Earnings"	June 30, 1903, 1904	+ 12.08	June 30, 1907, 1908	- 26.35	June 30, 1913, 1914	- 61.47
American Sugar Refining.....	"Net Earnings" 2	.....	.....	Jan. 2, 1908, 1909	- 25.07	Dec. 31, 1913, 1914	+ 45.37
American Thread.....	"Gross Profits" 3	.....	.....	Mar. 31, 1908, 1909	- 18.43	Mar. 31, 1914, 1915	- 26.59
American Tobacco.....	"Net Earnings after all Charges, etc."	March 31, 1904, 1905	- 22.05	.....	.....	.....	.....
American Woolen.....	"Net Profits" 4	Dec. 31, 1903, 1904	+ .34	Dec. 31, 1907, 1908	+ 4.87	Dec. 31, 1913, 1914	+ 3.30
Central Leather.....	"Total Income" 5	Dec. 31, 1903, 1904	+ 9.01	Dec. 31, 1907, 1908	- 62.68	Dec. 31, 1913, 1914	+ 7.03
Corn Products Refining 6	"Profits from Operation" 7	Dec. 31, 1903, 1904	+ 2.03	.....	.....	.....	.....
Distillers Securities 8	"Gross Profits"	Feb. 28, 1904, 1905	- 42.21	Feb. 28-30, 1908, 1909	+ 50.98	Dec. 31, 1913, 1914	+ 2.04
Eastman Kodak of New Jersey	"Net Profits" 9	June 30, 1903, 1904	- 7.36	June 30, 1907, 1908	- 45.96	June 30, 1913, 1914	- 46
E. I. du Pont de Nemours Powder.....	"Net Profits"	Dec. 31, 1903, 1904	+ 14.13	Dec. 31, 1907, 1908	+ 3.31	Dec. 31, 1913, 1914	- 20.12
General Asphalt.....	"Net Earnings"	.....	.....	Dec. 31, 1907, 1908	+ 25.44	Dec. 31, 1913, 1914	+ 4.79
General Chemical.....	"Net Trading Profits"	Jan. 31, 1904, 1905	+ .60	Jan. 31, 1908, 1909	- 2.07	Jan. 31, 1914, 1915	- 42.26
General Electric.....	"Net Profits" 10	Dec. 31, 1903, 1904	+ 10.76	Dec. 31, 1907, 1908	- 1.10	Dec. 31, 1913, 1914	+ 1.72
General Motors.....	"Balance" 11	Jan. 31, 1904, 1905	- 13.73	Jan.	- 27.09	Dec. 31, 1913, 1914	- 12.65
International Harvester Company.....	"Net Profits"	.....	.....	.....	.....	July 31, 1913, 1914	- 4.06
International Paper.....	"Net Profit" 12	June 30, 1903, 1904	- 12.72	Dec. 31, 1907, 1908	+ 9.07	Dec. 31, 1913, 1914	- 8.12
International Steam Pump.....	"Net" 13 from Mfg. Profits & Trading"	.....	.....	June 30, 1907, 1908	+ .12	Dec. 31, 1913, 1914	+ 12.21
Mergenthaler Linotype.....	"Total Net Profits"	March 31, 1904, 1905	- 11.49	March 31, 1908, 1909	- 16.81	Sept. 30, 1913, 1914	- 56.74
National Biscuit.....	"Net Profits" 14	Sept. 30, 1903, 1904	+ 2.57	Sept. 30, 1907, 1908	- 23.40	Sept. 30, 1913, 1914	- 7.05
National Lead.....	"Net Earnings" 15	Jan. 31, 1904, 1905	+ .60	Jan. 31, 1908, 1909	- 4.99	Jan. 31, 1914, 1915	- 12.53
Procter & Gamble.....	"Net Earnings"	Dec. 31, 1903, 1904	+ 1.70	Dec. 31, 1907, 1908	- 1.34	Dec. 31, 1913, 1914	- 73
Quaker Oats.....	"Profits"	.....	.....	.....	.....	June 30, 1913, 1914	+ 11.40
Sears-Robuck 16	"Gross Profits"	.....	.....	Dec. 31, 1907, 1908	- 17.54	Dec. 31, 1913, 1914	+ 3.51
Standard Oil of New York.....	"Net Earnings"	.....	.....	June 30, 1907, 1908	- 32.36	Dec. 31, 1913, 1914	- 2.01
Swift & Company.....	"Dividends & Additions to surplus and Reserve Funds" 17	.....	.....	.....	.....	Dec. 31, 1913, 1914	- 52.29
		Oct. 3, 1907, 1908	+ 20.72			Sept. 26-27, 1913, 1914	- 7.84

NET EARNINGS OF INDUSTRIAL COMPANIES (continued)

INDEX

Accounts, supervision of public-service corporation, by state commissions, 232.
 Alabama, debt history of, 122-124.
 American investments in foreign countries, 70-71.
 American securities held abroad, 69-70.
 Anglo-French dollar loan, 88-91.
 Argentine Republic, special security for certain bonds of, 5.
 Arkansas, debt history of, 109-110.
 Assessed valuation: for all States, 1912-1913, 98, 99; percentage of debt to assessed valuation for all the States, 98, 99; relation between true value of property and, 98; of counties and incorporated places, 141.
 Assessments: in railroad reorganizations, 186, 188-191; in public-service reorganizations, 246-248; in industrial reorganizations, 290-291.
 Assets offsetting national debts, 17-19.
 Atchison, Kansas, attempted bad faith by, 155, 304.
 Atchison, Topeka & Santa Fé Railroad Company: causes of failure of, 167; summary of reorganization of, 187; foreclosure price compared with debt of, 187; what security-holders received in reorganization of, 188; market value of new securities received in reorganization of, 193.
 Austria-Hungary: price of Austrian and Hungarian bonds 1913, 7; racial origin of, 9; outline of history of, 13; population, wealth and debt of, 15-17; assets offsetting national debt of, 18; national debt charge compared with national income, 20; national debt charge compared with total government expenditure, 21; growth in population of, 22, 23; growth in wealth of, 24-25; increase in debt of, 27, 29; debt history of, 39-40; form of government in, 62; character of population of, 63; military position of, 64; economic position of, 65; foreign

commerce of, 67, 68; position of, among nations, 73; prices of Austrian rentes, 77; cost of present war to, 76, 78; total losses of present war to, up to July 31, 1915, 79; war loans put out since beginning of present war up to October 23, 1915, 82, 83; war prices of government bonds, 91, 92; state-operated railways in, 176.
 Bad faith, cases of, 155; attempt at, by Atchison, Kansas, 155, 304.
 Baltimore & Ohio Railroad Company: causes of failure of, 167; summary of reorganization of, 187; what security-holders received in reorganization of, 191; market value of new securities received in reorganization of, 193.
 Banking business, ix, 65, 68.
 Banking commissions, 68.
 Bolivia, government loans in default, 59.
 Bond business in the United States, x.
 Bond investment, framework of, 3.
 Bonding, of industrial concerns, 257.
 Bonds: investment in, a modern development, ix; as a channel of investment, 1; what they represent, 3; principal classes of investment, 3; the two great markets for, 3; framework of bond investment, 3; safety of, 3-4; United States and foreign government, 5-93; state, 94-139; county, municipal, and district, 140-161; special assessment, 140; steam-railroad, 162-197; public-service corporation, 198-250; industrial, 251-294; municipal refunding, 150; first mortgage, 162; consolidated mortgage, 162; general mortgage, 162; debenture, 162; plain, 162; income, 162; convertible, 162; equipment, 162-163; collateral trust, 162-163; terminal, 163; guaranteed, 163.
 Boston Sliding Scale Act, 206.
 Bulgaria, special security for certain bonds of, 5-6.

- California: debt history of, 112-113; favorable factors affecting credit of, 137; joint use of facilities by public-service corporations in, 216; California Commission on determining fair value as a basis for rates, 221; local regulation of public-service corporations in, 233.
- Capitalization: of American and European railways compared, 194; gross and net, of all railroads, 197; regulation of public-service, by state commissions, 230-232; total, in industrial and railroad reorganizations, 289-290.
- Certificates of public convenience and necessity, of public-service corporations, 209, 212-213; conditions regulating issuance of, 213.
- Certification: of state bonds, 131; of county, municipal, and district bonds, 157-158.
- Chicago City Railway Company, franchise of, 206.
- Chicago Railways Company, franchise of, 206.
- Chicago Union Traction Company, reorganization of, 241, 243, 244, 246, 248.
- Circuit Court of Appeals: jurisdiction of, in enforcement of Clayton Act, 272; appeal from Federal Trade Commission to, 273.
- Civilization, changes in leadership of, 9-10.
- Clayton Anti-Trust Law: enactment of the, 267; leading provisions of the, 268-269; amplifies and supplements the Sherman Anti-Trust Law, 269-270; in regard to exports, 270; holding companies, 270; interlocking directorates, 271; personal-guilt clause in the, 271; machinery of enforcement of the, 271-272; summary of the, 272.
- Cleveland Railway Company, franchise of, 206-207.
- Colombia, government loans in default, 59.
- Combination: forms of, 258-259; economic advantages of, 259-260; disadvantages of, 260-261; successful and unsuccessful large-scale operation, 261; distinction between advantages and disadvantages of, and monopoly control, 261; motives for, 262; advantages of corporate form of, 262.
- Commission form of government, 157.
- Commissions: regulation by state, of public-service corporations, 207-233; modern public-service, 208, 209, 210-212; present state, having jurisdiction over street-railway, gas, electric-light and power or telephone companies, 209, 210-212; leading principles of regulation of public-service corporations by state, 209, 212-232; authority of, over rates of public-service corporations, 218; authority of, to approve or disapprove issue of public-service securities, 230-232; judicial review of decisions by state commissions, 232-233.
- Competition: railroad, 164-165, 166, 256; public-service corporation, 256; governing factor in existence of industrial concerns, 256; saving of the wastes of, 260; monopoly control and, 267; potential and effective, 267; unfair methods of, 272-273, 275-276; three sources of possible, in failure of industrial concerns, 286.
- Consolidated mortgage bonds, 162.
- Consolidations: attitude of state commissions toward public-service corporation, 213-214; basis on which, are permitted in various States, 214; purposes of industrial promotions and, 284.
- Constitutional limitations in regard to creation and payment of state debt, 129-131; of local debt, 143-152.
- Convertible bonds, 162.
- Corporations: various classes of public-service, 198; origin and development of business done by public-service, 199-202; points of similarity in different classes of public-service, 202; rate of return on capital invested in public-service, 219; broad relation of public-service, to the people, 238-239; development of, as a means of carrying on business, 251-252; fluctuating nature of business done by industrial, 252; net earnings of some leading industrial, 252-255; competitive nature of business done by industrial, 256; importance of good management of industrial, 256-257; question as to whether competitive industrial, should be bonded, 257; conditions which may furnish proper basis for bonding of industrial, 257-258; ad-

- vantages to industrial concerns in combining in form of, 262; subject to public control, 262; suggestion of federal incorporation of industrial, 283-284; causes of failure in special cases of industrial, 287-288; care taken in bonding of industrial, 286-289.
- Costa Rica, government loans in default, 59.
- Cost of service as a basis for rates, 218-219.
- Cost of war: to leading nations involved, 76-77, 78-81; comparison of present, with that of previous wars, 80.
- County bonds: definition of, 140; means of recovery on defaulted, 140; factors governing safety of, 140-141, 152-153, 157; laws in regard to issue of, in Massachusetts, 143-146; comparison of Massachusetts laws with those of other States in regard to issue of, 146-152; purposes of issue of, 148-150; issue of, for improper or unwise purposes, 149-150; length of time which bonds may run, 150-151; vote of people to authorize, 151; payment of, by sinking-fund or serial method, 151; amount and character of population important factors in safety of, 152-153; record of, 153-157, 297-303; causes of default in, 154-155, 297-303; settlements made with bondholders on defaulted, 155-156, 297-303; legality of issue and certification as to genuineness, 157-158; safety of, 161.
- Credit: of nations shown by prices of their bonds, 7, 8; bearing of historical development on, 15; certain factors determining national, 15, 58, 63-71; normal conditions *vs.* the war, 15; most important factor in estimating national, 58; considerations in estimating state, 94-95, 132-137; summary of factors bearing on state, 137.
- Creditor nations, 65-70.
- Debenture bonds: definition, 162; remedies for non-payment of, 163.
- Debt: of leading civilized nations, 15-17; percentage of national, to resources, 16; assets offsetting national, 17-19; burden of national, 19; comparison of national debt charge with national income, 19, 20; comparison of national debt charge with total government expenditure, 19, 21; increases in national, 26-29; changes in national, charges, 29-30; debt histories of leading nations, 30-57; summary of national, histories, 57-58; war, 81-84; debt statements of various States, 95-97; percentage of net, to assessed valuation for all the States, 98, 99; changes in total of state, 1790-1913, 98-100, 101; reason for comparative freedom of our States from, 100; importance of state history of, 100; debt histories of all defaulting States, 100-128; summary of state debt histories, 128-129; provisions for debt-making in state constitutions, 129-131; proportion of net, to assessed valuation, 141; of counties and incorporated places, 141; of ten largest cities in the United States, 141-142; quasi-municipal debt-creating corporations, 142-143; burden of, on local communities, 142-143; constitutional and statutory provisions in regard to local, 143-152; comparison of Massachusetts laws with those of other States in regard to local, 146-152; position of the legislature in regard to local, 146-147; limitations on local, 147-148; exceptions in regard to creation of local, 147-148; limiting and removing tax limit, 148; methods of paying local, 151; increase in local, 1890, 1892, and 1913, 158-159; local, 1913, 159; local, in Great Britain, France, and Germany, 159; proportions between local, state, and national, 159; relation of, to assets of steam railroads, 163; ratio of, to assets of public-service corporations, 203; amount of plant and of quick assets of industrial concerns compared with, 258.
- Debt charges: comparison with national incomes, 19-20; comparison with total government expenditures, 19, 21; changes in, 29-30.
- Debt history: of leading nations, 30-57; of France, 30-33; Great Britain, 34-39; Austria-Hungary, 39-40; United States, 41-49; Russia, 49-51; Italy, 51-52; Germany, 52-55; Japan, 55-57; summary of national, 57-58; government loans in default, 58, 59; importance of state, 100; of all defaulting States, 100-128; of Pennsylvania, 103; Maryland,

- 103-104; Indiana, 104-105; Illinois, 105-106; Michigan, 106-107; Florida, 107-108; Mississippi, 108-109; Arkansas, 109-110; Minnesota, 110-111; Texas, 111-112; California, 112-113; Virginia, 114-117; West Virginia, 117-118; North Carolina, 118-119; South Carolina, 119-121; Georgia, 121-122; Alabama, 122-124; Tennessee, 124-125; Louisiana, 125-127; Missouri, 127-128; of New York, 128; Ohio, 128; Massachusetts, 128; summary of state, 128-129.
- Debtor nations, 65-70.**
- Default:** collection of government bonds in, 6; nations in default in 1874, 57; loans of independent governments in, between 1877 and 1912, 58, 59; collection of state bonds in, 94; three periods of, of state bonds, 100-129; first period of, of state bonds, 100, 102-110; second period of, of state bonds, 100, 110-113; third period of, of state bonds, 100-101; 113-128; means of recovery on county, municipal, and district bonds in, 140; causes of, in county, municipal, and district bonds, 154-155; settlements made with bondholders on defaulted county, municipal, and district bonds, 155-156, 297-303; remedies for collection of railroad bonds in, 163; railroad bonds in, 165.
- Depreciation:** general rule for treatment of, in estimating fair value, 224-225; treatment of, under various circumstances, 225; summary of, question, 225-226; United States Supreme Court on, 226.
- District bonds:** definition, 140; means of recovery on defaulted, 140; factors governing safety of, 140-141, 152-153, 157; laws in regard to issue of, in Massachusetts, 143-146; comparison of Massachusetts laws with those of other States in regard to issue of, 146-152; purposes of issue of, 148-150; issue of, for improper or unwise purposes, 149-150; length of time which bonds may run, 150-151; vote of people to authorize, 151; payment of, by sinking-fund or serial method, 151; amount and character of population important factors in safety of, 152-153; record of, 153-157; causes of default in, 154-155; settlements made with bondholders on defaulted, 155-156; legality of issue and certification as to genuineness, 157-158; safety of, 161.
- District Courts, jurisdiction of, in enforcement of the Federal Trade Commission Law, 275.**
- Domestic commerce of the United States, 66.**
- Earnings:** railroad, 169-170, 239; stability of gross, of public-service corporations, 239; net, of public-service corporations, 240; net, of industrial concerns, 252-256, 308-309.
- Economic position, of nations, 64-65.**
- Ecuador, government loans in default, 59.**
- Electric light and power, origin and development of, industry, 200-201.**
- Electric railways, origin and development of, 199-200.**
- Elizabeth, New Jersey, default by, 154, 156, 297, 301.**
- England, early government borrowing in, ix-x; development of, 10. See Great Britain.**
- Equipment bonds, 162-163.**
- Expenditure:** debt charge compared with government, 19, 21; government, necessity for reduced, after the war, 85-86.
- Failures:** of railroads, 165-168; of public-service corporations, 240-248; of industrial concerns, 285-288.
- Fair value of property, 219, 220, 222.**
- Federal licensing or incorporation of railroads, 172-173; of industrial corporations, 283-284.**
- Federal Trade Commission:** make-up of, 272; power of, to prevent unfair methods of competition, 272-273; appeal to decision of Circuit Court of Appeals from, 273; other powers and duties of the, 273-275; comparison of, with Interstate Commerce Commission, 276-277; comparison of certain functions of, with the action of a master in chancery, 277; general powers and functions of the, 277-278; relation between the, and the Department of Justice, 278; publicity features, 278-279; policy of the, as outlined by Chairman Davies, 279; in a position to do constructive work, 279-

- 280; precedents and analogies for the, 280; new Federal Trade Commission Law substitutes regulation by, for regulation by lawsuit, 280.
- Federal Trade Commission Law: enactment of the, 267-268, 272; leading provisions of the, 272-275; publicity features of the, 278-279; criticisms of the, 281-282.
- Financial stability depends on the people, 132, 139, 153.
- First-mortgage bonds: definition of, 162; remedies for non-payment of, 163.
- Fixed charges: in railroad reorganizations, 186; in public-service reorganizations, 247-248; in industrial reorganizations, 290.
- Florida, debt history of, 107-108.
- Foreclosure price, in railroad reorganizations, 187, 192; relation between, and value of railroad property, 187, 192; in public-service reorganizations, 241, 243, 246; in industrial reorganizations, 290.
- Foreign commerce of leading nations, 66-68.
- Foreign or colonial investments: of Great Britain, 65, 68-69, 70, 88-89, 90; of France, 65, 70, 72, 88-89, 90; of Germany, 70; of the United States, 70-71.
- Foreign remittances, 68, 69.
- France: early government borrowing in, ix; early local loans in, x; government bonds of, 5; prices of French rentes, 1913, 7; racial origin of, 9; outline of history of, 10-11; population, wealth, and debt of, 15-17; assets offsetting national debt of, 18; national debt charge compared with national income, 19, 20; national debt charge compared with total government expenditure, 19, 21; growth in population of, 21, 22, 23; growth in wealth of, 24, 25, 26; increase in national income of, 26; increase in debt of, 27, 29; debt history of, 30-33; form of government in, 60; character of population of, 63; military position of, 64; economic position of, 65; foreign commerce of, 67, 68; foreign investments of, 65, 70, 72, 88-89, 90; position of, among nations, 72; prices of French rentes, 74, 75, 76, 77; cost of present war to, 76, 78; total losses of present war to July 31, 1915, 79; war loans put out since beginning of present war up to October 23, 1915, 82, 83; war prices of French bonds, 91-92; Anglo-French dollar loan, 88-91; state operated railways in, 174, 176; regulation of railways in, 177-178.
- Franchises: description of public-service corporation, 204; burdensome restrictions in public-service corporation, 204-205; length of public-service corporation, 205; revocable licenses or indeterminate permits, 205; consent of local authorities to installation of property, 205; difficulties in bringing about solution of franchise question, 205; best kind of, 205-206; of Chicago City Railways and Chicago Railways, 206; of Cleveland Railway, 206-207; interesting franchise arrangements, 206-207; public-service corporation, said to exist to enable bankers to sell bonds, 212; franchise value, 228-229.
- Freights, 68, 69, 70.
- Funds: investment of, difficult, 1; when they should be invested, 1. *See* Sinking funds.
- Galveston, Texas, default by, 155, 299-300, 301.
- Gas industry, origin and development of, 199, 200.
- General mortgage bonds: definition of, 162; remedies for non-payment of, 163.
- Georgia, debt history of, 121-122.
- Germany: government bonds of, 5; prices of German bonds, 1913, 7; racial origin of, 9; outline of history of, 11-12; population, wealth, and debt of, 15-17; assets offsetting national debt of, 17-18; national debt charge compared with national income, 20; national debt charge compared with total government expenditure, 21; growth in population of, 22, 23; growth in wealth of, 24, 25, 26; increase in national income of, 26; increase in debt of, 27, 29; debt history of, 52-55; form of government in, 61-62; character of population of, 63; military position of, 64, 72; economic position of, 65; foreign commerce of, 67, 68; foreign investments of, 70; position of, among nations, 72-73; prices of Prussian consols, 1880-1912, 77; cost of present war to, 76, 78, 79;

- total losses of present war up to July 31, 1915, 79; war loans put out since beginning of present war up to October 23, 1915, 82, 83; war prices of German bonds, 91, 92; state-operated railways in, 174, 175-176; municipal ownership and operation of public utilities in, 235, 236.
- Going concern value, 227-228.
- Government: early, loans, ix; early, borrowing in France, England, and the United States, ix-x; forms of, of leading nations, 58, 60-63; commission form of, 157.
- Government bonds: description of, 5; how payable, 5; of United States, Great Britain, France, and Germany, 5; special security for some, 5-6; no method of collecting defaulted, 6; can be issued for any purpose, 6; prices of, 1913, 7; in default, 58, 59; prices of British consols and French rentes, 74-75; prices of leading, 1873-1912, 74, 76, 77; proper attitude of American investors toward foreign, 87-88; war prices of, 91-93; summary of factors entering into values and prices of, 93.
- Government ownership of railroads: 173-176; two forms of, 173; extent of, 174; arguments in favor of, 174-175; arguments against, 175; results of, 175-176.
- Great Britain and Ireland: government bonds of, 5; price of British consols, 1913, 7; racial origin of, 9; development of, 10; population, wealth, and debt of, 15-17; assets offsetting national debt of, 17; national debt charge compared with national income, 20; national debt charge compared with total government expenditure, 21; growth in population of, 20-21, 22, 23; growth in wealth of, 23, 25, 26; increase in national income of, 26; increase in debt of, 27, 29; debt history of, 34-39; form of government in, 60; character of population of, 63; military position of, 64; economic position of, 65; foreign commerce of, 67, 68; colonial and foreign investments of, 65, 68-69, 70, 88-89, 90; position of, among nations, 72; prices of British consols, 74, 75, 76, 77; cost of present war to, 76, 78; total losses of present war up to July 31, 1915, 79; war loans put out since beginning of war up to October 23, 1915, 81-82; war prices of British bonds, 91, 92; Anglo-French dollar loan, 88-91; regulation of railways in, 177; municipal ownership and operation of public utilities in, 235, 236.
- Greece: special security for certain bonds of, 6; government loans in default, 1877, 59.
- Gross earnings: of railroads, 165, 239; of public-service corporations, 239.
- Guatemala, government loans in default, 59.
- Historical development: United States, 10; Great Britain, 10; France, 10-11; Germany, 11-12; Italy, 12-13; Austria-Hungary, 13; Russia, 13-14; Japan, 14-15; bearing of, on credit, 15.
- Holding companies: public service, 198; industrial, 268-269, 270.
- Honduras, government loans in default, 59.
- Hudson River Electric Power Company, reorganization of, 243, 245-246, 248.
- Hungary. *See* Austria-Hungary.
- Illinois, debt history of, 105-106; favorable factors affecting credit of, 137.
- Income: national, 19, 20, 26; of railroads, 170.
- Income bonds, 162.
- Incorporation, federal: of railroads, 172-173; of industrial concerns, 283-284.
- Indiana: debt history of, 104-105; franchises in, 205.
- Industrial bonds: definition of, 251; development of the issue of, 251-252; most important factor in safety of, 256-257; should be issued in serial form or have sinking fund, 258; necessary to consider each issue of, 292; examples of strong, 292-293; prices of leading, 1914, 293-294; effect of European war on, 294; care required in selection of, for investment, 294.
- Industrial concerns: origin and development of, 251-252; fluctuating nature of business done by, 252; net earnings of some leading, 252-256, 308-309; competitive nature of business done by, 256; importance of good management of, 256-257; question as to whether com-

- petitive, should be bonded, 257; conditions which may furnish proper basis for bonding of, 257; plant and quick assets compared with debt of, 258; relation of great, to the public, 258; combination of, 258-259; origin of the "trust" question, 259; large-scale operation and monopoly control by, 261, 284-285; Sherman Anti-Trust Law, 262-267; Clayton Anti-Trust Law, 267-272; suggestion of federal incorporation of, 283-284; failure of earnings to meet estimates, 285; various degrees of failure of, 285; leading business causes of failure of, 285; proportion between tangible assets and total capitalization, 285; sources of possible competition, 286; direct cause of failure of many, 286; causes of failure of certain large, 286, 287-288; bonding of, 286-289; general conditions necessary to success of, 289; reorganizations of, 289-292; total capitalization in reorganizations of, 289-290; fixed charges in reorganizations of, 290; treatment of bondholders in reorganizations of, 290; table showing sacrifices made by bondholders in certain reorganizations of, 291; summary of reorganizations of, 292.
- Interborough Rapid Transit Company agreement, 207; made effective only through public-service commission, 207.
- Interest on foreign capital, 68, 69, 70, 90.
- Interstate Commerce Commission: establishment of, 168; increase in powers of, 168-169; unable to handle problem of railway regulation, 178; federal valuation of all railroads under auspices of, 181; comparison of Federal Trade Commission with the, 276-277.
- Investment: in bonds a modern development, ix; of funds difficult, 1; leading channels of, 1; three principal kinds of, 1; funds should be invested when received, 1; framework of bond, 3; municipal bonds among safest mediums of, 161; selection of industrial bonds for, requires great care, 294.
- Investments: colonial and foreign, of Great Britain, 65, 68-69, 70, 88-89, 90; of France, 65, 70, 72, 88-89, 90; of Germany, 70; of the United States, 70-71.
- Invisible trade balance, 68-71; colonial and foreign investments of nations, 68-71; interest, tourist expenditures, remittances to friends, freights, 69; American securities held abroad, 69-70; lending countries, 70.
- Issue of securities: conflict of authority in approval of, by railroads, 170; federal supervision of the, by railroads, 179-180; authority of commissions to approve or disapprove, 230-232; in New York State, 230-231; wisdom of commission control of the, 231-232; publicity method of control of the, 232.
- Italy: price of Italian bonds, 1913, 7; racial origin of, 9; outline of history of, 12-13; population, wealth, and debt of, 15-17; assets offsetting national debt of, 18; national debt charge of, 20; national debt charge compared with total government expenditure, 21; growth in population of, 22, 23; growth in wealth of, 24, 25; increase in debt of, 27, 29; debt history of, 51-52; form of government in, 60-61; military position of, 64; economic position of, 65; foreign commerce of, 67, 68; position of, among nations, 73; prices of Italian rentes, 77; war loans put out by, since beginning of present war up to October 23, 1915, 82, 83; war prices of Italian bonds, 91, 92; state-operated railways in, 176; municipal ownership and operation of public utilities in, 236.
- Japan: special security for certain bonds of, 5; prices of Japanese bonds, 1913, 7; racial origin of, 9; outline of history of, 14-15; population, wealth, and debt of, 15-17; assets offsetting national debt of, 18; national debt charge of, 20; national debt charge compared with total government expenditure, 19, 21; growth in population of, 23; increase in debt of, 27, 29; debt history of, 55-57; form of government in, 62-63; character of population of, 63; military position of, 64; economic position of, 65; foreign commerce of, 67, 68; position of, among nations, 73; prices of Japanese bonds 1903-1912, 77; war prices of Japanese bonds, 91; state-operated railways in, 176.
- Judicial review, of public-service commission decisions, 232-233.

- Laws:** constitutional, in regard to state debts, 129-131; Massachusetts, in regard to creation and payment of local debt, 143-146; comparison of Massachusetts, with those of other States in regard to local debt, 146-152; Sherman Anti-Trust Law, 262-267; Clayton Anti-Trust Law, 267-272; Federal Trade Commission Law, 267-268, 272-282; railroad, 305-307.
- Legality of issue:** of state bonds, 131; of municipal bonds, 157-158.
- Length of time to run:** of state bonds, 131; of county, municipal, and district bonds, 150-151.
- Liberia,** government loans in default, 59.
- Literacy:** of nations, 63; by States, 135-136.
- Loaning credit:** of States, 131; of counties, municipalities, and districts, 149-150.
- Local debt:** early, in France and the United States, x; proportions between county, city and school district, 159; in 1913, 159; proportions between national, state and, 159.
- Los Angeles,** local regulation of public-service corporations in, 233.
- Louisiana,** debt history of, 125-127.
- Market for bonds,** 3.
- Maryland,** debt history of, 103-104.
- Massachusetts:** debt record of, 128; statutory provisions in regard to local debt in, 143-146; comparison of Massachusetts laws with those of other States in regard to creation of local debt, 146-152; limiting debt and removing tax limit in, 148; purposes for which county, municipal, and district bonds are issued in, 144-146, 148-149; length of time which municipal bonds may run in, 144-146, 150; method of paying local debt in, 151; street-railway, gas and electric-light franchises in, 205; early state commissions in, 208; municipal ownership and operation in, 234.
- Memphis, Tennessee,** defaults by, 155, 156, 297-298, 302.
- Metropolitan Street Railway Company,** New York, reorganization of, 246-248.
- Mexico:** special security for certain bonds, 6; government loans in default, 58, 59.
- Michigan,** debt history of, 106-107.
- Michigan Telephone Company,** reorganization of, 241-242, 246, 248.
- Middlesboro, Kentucky,** default by, 154, 300, 302.
- Military position of nations,** 64.
- Minnesota,** debt history of, 110-111; decisions in, rate cases, 170-172.
- Mismanagement of local finances,** 157.
- Mississippi,** debt history of, 108-109.
- Missouri,** debt history of, 127-128.
- Monopoly:** recognition of, in cases of public-service corporations, 202, 203-204, 209.
- Monopoly control:** combination and, 261; competition and, 267; capitalization of, 267, 285, 287, 288; machinery for preventing, 282-283; certain experiences in, 284-285.
- Mortgage:** real-estate, 2; first, bonds, 162, 163; consolidated, bonds, 162; general, bonds, 162.
- Municipal bonds:** definition of, 140; means of recovery on defaulted, 140; certain factors governing safety of, 140-141, 152-153, 157; laws in regard to issue of, in Massachusetts, 143-146; comparison of Massachusetts laws with those of other States in regard to issue of, 146-152; purposes of issue of, 144-146, 148-149; issue of, for improper or unwise purposes, 149-150; length of time which bonds may run, 144-146, 150-151; vote of people to authorize, 151; payment of, by sinking fund or serial method, 151; amount and character of population important factors in safety of, 152-153; leading municipal securities in the United States, 153; record of, 153-157; causes of default in, 154-155, 297-303; cases of bad faith with, 155; settlements made with bondholders on defaulted, 155-156, 297-303; mismanagement of local finances, 157; commission form of government, 157; legality of issue and certification as to genuineness, 157-158; increase in issue of, 158-159; increasing issue of, to acquire public utilities, 159; prices of, 1902-1912, 160; war prices of, 160-161; safety of, 161.
- Municipal ownership and operation:** possible municipal purchase of public utilities, 159, 214-215, 234; in Massachu-

- setts, 234; in other States, 234-235; in Europe, 235-236; wisdom of, in the United States, 236.
- National income: compared with debt charge, 19, 20; growth in, of leading nations, 26.
- Nations: no legal remedy against defaulting, 6; can borrow for any purpose, 6; racial origin of the leading modern, 9; changes in leadership among, 9-10; growth in population of, 20-23; growth in wealth of, 23-26; growth in income of, 26; growth in debts of, 26-29; forms of government of various, 58, 60-63; character of population of, 63; military position of, 64; economic position of, 64-65; trade position of, 66; foreign commerce of, 66-68; invisible trade balance, 68-71; lending, 70; situation of the leading, 71-73; reduced expenditures necessary for national solvency, 85-86; status of, after the war, 86-87.
- Net earnings: of railroads, 169-170, 240; of public-service corporations, 240; and receiverships of railroads, gas and electric companies and industrials, 240; of industrial concerns, 240; in 1903 and 1904, 253; 1907 and 1908, 254; 1913 and 1914, 255; of industrial concerns for three periods, 308-309.
- New Hampshire, statement by Public-Service Commission, of proper treatment of depreciation in estimating value as a basis for rates, 225-226.
- New York State: debt record of, 128; favorable factors affecting credit of, 136-137; basis on which public-service consolidations are permitted in, 214; regulation of issue of securities of public-service corporations in, 230-231.
- North Carolina, debt history of, 118-119.
- Northern Pacific Railroad Company: causes of failure of, 167; summary of reorganization of, 187; what security-holders received in reorganization of, 190; relation between foreclosure price and debt of, 187, 192; market value of new securities received in reorganization of, 193.
- Notes, short term, 163.
- Ohio, debt record of, 128.
- Operation: possible government, of railroads in the United States, 173-175; results of state, of railways in Europe, 175-176; municipal, of public-service corporations in Massachusetts, 234; municipal ownership and, of public-service corporations elsewhere in the United States, 234-235; municipal ownership and, of public-service corporations in Europe, 235-236; municipal, of public utilities and government, of railroads, 236; possible advantages and disadvantages of large-scale, of industrial concerns, 259-261; successful and unsuccessful large-scale, of industrial concerns, 261; certain experiences in large-scale, 284-285.
- Original cost method in estimating value as a basis for rates, 220.
- Overhead charges, allowance for, in estimating value as a basis for rates, 226-227.
- Ownership: government, of railroads, 173-175; two forms of government, of railroads, 173; extent of government, of railroads, 174; arguments in favor of government, of railroads, 174-175; arguments against government, 175; results of state operation in Europe, 175-176; regulation vs. government, 177; municipal, of public-service corporations in Massachusetts, 234; municipal, of public-service corporations elsewhere in the United States, 234-235; municipal, of public-service corporations in Europe, 235-236; municipal, of public utilities more feasible but less necessary than government ownership of railroads, 236; government, of telephone lines, 237-238; government, of water-power developments, 238.
- Paraguay, government loans in default, 59.
- Peace, possible basis of, 84-85.
- Pennsylvania, debt history of, 103.
- Peru, government loans in default, 59.
- Pittsburg, Pennsylvania, defaults by, 154, 156, 298-299, 302.
- "Plain" bonds, 162.
- Population: of leading nations, 15-16; growth in, of leading nations, 20-23;

- character of, important in estimating national credit, 63; amount and increase of, by States, 1900-1910, 132, 133; color of, by States, 1900-1910, 132, 134; literacy of, in the United States, 135, 136; an important consideration in safety of local debt, 152-153; amount and character of, important factors in estimating safety of public-service corporation bonds, 202-203.
- Prices: of government bonds, 7, 74-76, 77, 91-93; of state bonds, 137-139; of municipal bonds, 160-161; of railroad bonds, 196; of public-service corporation bonds, 198-199, 250; of industrial bonds, 293-294.
- Promotions: corporate, and reorganizations, 284; purposes of industrial, and consolidations, 284.
- Public: relation of railroads to the, 169-170; relation of public-service corporations to the, 204, 238-239; relation of telephone companies to the, 237-238; relation of water-power developments to the, 238; relation of industrial concerns to the, 258; corporations subject to control of the, 262.
- Public properties: value of state, 98; value of local, 158.
- Public-service commissions: regulation of railroads by State, 169; establishment of early, 208; establishment of modern, 208; present, having jurisdiction over street railway, gas, electric light and power and telephone companies, 210-212.
- Public-service corporations: issue of municipal bonds to acquire public utilities, 149, 159; origin and development of business done by, 199-202; points of similarity in different classes of, 202; monopolistic character of, 203-204; franchises of, 204-207; regulation by state commissions of, 207-208; present state commissions having jurisdiction over, 209, 210-212; leading principles of state regulation of, 209, 213-232; recognition of monopoly principle, 209; certificates of public convenience and necessity, 209, 212-213; consolidations of, 213-214; possible municipal purchase of, 214-215; valuation of, as a basis for rates, 220-230; state vs. local regulation of, 233; Uniform Utilities Bill, 233; municipal ownership of, 234-236; broad relation of, to the people, 238-239; stability of gross earnings of, 239; net earnings and receiverships of, 240; receiverships and reorganizations of, 240-248; summary of situation of, 248; financial plan of, should be broad, flexible, and firm, 249-250.
- Public-service corporation bonds: principal classes of, 198; prices of some leading, 198-199; size and character of community served an important factor in safety of, 202-203; ratio of debt to assets of, 203; how regulation by state commissions affects safety of, 208; examples of strong, 248-249; prices of, 250; war prices of, 250; final test of, 250.
- Purpose of issue: of government bonds, 6; of state bonds, 94, 129-131; should be of a strictly public character, 129, 148-149; of county, municipal, and district bonds, 144-149; unwise or improper purposes, 149-150.
- Quasi-municipal corporations, 142.
- Racial origin of leading modern nations, 9.
- Railroad bonds: definition of, 162; various kinds of, 162; payable from property or earnings, 163; certain factors governing safety of, 163, 195; remedies for non-payment of, 163; a popular medium of investment, 164; conditions to be considered before investing in, 164-165; defaults on, 165; examples of strong, 195-196; prices of, 196; war prices of, 196.
- Railroads: beginning and growth of, 164; growth in mileage of, 164, 166; competition of, 165, 256; gross income of, 165, 239; subject to conflicting regulation, 165; cost of financing and operating, 165; receiverships and reorganizations of, 165-166; leading causes of railroad troubles, 166; difficulties of, since 1893-98, 166, 168; failures of various, 166, 167; summary of causes of railroad troubles, 168; establishment of Interstate Commerce Commission, 168; increase in powers of the commission, 168-169; regulation of, by state legislatures and public-service commissions, 168-169; relation of, to the public,

- 169-170; arbitration of wages on, 170; regulation by States of issues of securities, 170; possible exclusive control of, by Federal Government, 170; Minnesota rate cases, 170-172; Shreveport rate cases, 172; comparison of Minnesota and Shreveport cases, 172; federal licensing or incorporation of interstate, 172-173; government ownership of, 173-175; government ownership and operation of, in Europe, 17-18, 175-176; regulation of, 177-180; regulation of, in Great Britain and Ireland, 177; regulation of, in France, 177-178; regulation of, in Europe, 178; outline for exclusive federal regulation of all, in the United States, 178-180; supervision of securities of, 179-180, 232; regulation of, rates, 179-181; rates should be reasonable and compensatory, 180; bases of rate-making, 180; limits of high and low railroad rates and ideal rate, 180-181; federal valuation of, 181-183; valuations of, made by certain States, 183, 184; possible result of federal valuation of, 183; suggested railroad reforms, 183, 185; objects of proper regulation of, 185; two periods of reorganizations of, 185-186; reorganization of Atchison, Topeka & Santa Fé Railroad Company, 187, 188, 193; Union Pacific Railway Company, 187, 189, 193; Northern Pacific Railroad Company, 187, 190, 192, 193; Baltimore & Ohio Railroad Company, 187, 191, 193; relation between foreclosure price and value of property, 187, 192; rights of minority bondholders in foreclosure, 192; capitalization of American and European, compared, 194; passenger rates of American and European, compared, 194-195; freight rates of American and European, compared, 194-195; comparison of efficiency of American and European, 194-195; magnitude of railroad industry, 196-197; gross and net capitalization of all, 197; importance of service performed by American, 197; should be subject to federal regulation, 197; laws, 305-307.
- Railways, origin and development of street and electric, 199-200.
- Rate-making: bases of railroad, in the United States, 180; principles of, for public-service corporations, 218.
- Rates: regulation of railroad, 179-181; railroad, should be reasonable and compensatory, 180; bases of railroad rate-making, 180; limits of high and low railroad, and ideal rate, 180-181; comparison of American and European passenger, 194-195; comparison of American and European freight, 194-195; railroads are entitled to fair, 197; regulation of public-service corporation, by state commissions, 215; interrelationship of service and, of public-service corporations, 217; authority of commissions over, of public-service corporations, 218; bases of, for public-service corporations, 218-219; fair return on fair value of property, 219; rate of return for public-service corporations, 219; variable rate of return, 219; valuation of public-service corporations as a basis for, 220-230; summary of valuation as a basis for, 229-230.
- Real estate: advantages and disadvantages of, as an investment, 2; mortgages, 2.
- Receiverships: railroad, 165-168, 240; public-service, 240; industrial, 240; net earnings and, of railroads, gas and electric companies and industrials, 240.
- Reforms, suggested railroad, 183, 185.
- Refunding bonds, 150.
- Regulation: railroad, by Interstate Commerce Commission, 168-169; railroad, by state legislatures and public-service commissions, 169; state, of issues of new railroad securities, 170; of American railroads by Federal Government alone, 170; government ownerships, 177; railway, in Great Britain and Ireland, 177; of railways in France, 177-178; of railways in Europe, 178; outline for exclusive federal, of all interstate railroads, 178-180; of railroad rates, 179-181; railroads should be subject to federal, 197; of public-service corporations by state commissions, 207-208; leading principles of state, of public-service corporations, 209, 213-232; principal sources of material used in discussing state, of public-service corporations, 209; of rates and service by state commissions, 215;

- of service, 215-217; of rates, 218-230; fair return on fair value of property, 219; rate of return, 219; fair value of property, 220; of capitalization of public-service corporations by state commissions, 230-232; supervision of accounts and ordering of reports of public-service corporations, 232; state vs. local, of public-service corporations, 233; of telephone lines by Federal Government, 237-238; of water-power companies, 238.
- Reorganizations: railroad, 185-194; two periods of railroad, 185-186; general summary of two periods of railroad, 186; assessments in railroad, 186, 188-191; earlier railroad, less effective than later, 186; Atchison, Topeka & Santa Fé Railroad, 187, 188, 193; Union Pacific Railroad, 187, 189, 193; Northern Pacific Railroad, 187, 190, 192, 193; Baltimore & Ohio Railroad, 187, 191, 193; factors determining apportionment of new securities in railroad, 192; market value of securities received in certain railroad, 192-194; public-service, 240-248; Michigan Telephone Company, 241-242, 246, 248; Chicago Union Traction Company, 241, 243, 244, 246, 248; Hudson River Electric Power Company, 243, 245, 246, 248; Metropolitan Street-Railway Company, 246-248; summary of four public-service, 246, 248; corporate promotions and, 284; industrial, 289-292; aim of industrial, 289; total capitalization in railroad, 289-290; total capitalization in industrial, 289-290; fixed charges in industrial, 290; treatment of bondholders in industrial, 290; sacrifices made by bondholders in certain industrial, 290-292; summary of industrial, 292.
- Replacement, cost of, theory, 220.
- Reports: ordering of, of public-service corporations by state commissions, 232; may be asked by Federal Trade Commission, 274, 277.
- Reproduction new, cost of, theory, 220.
- Repudiation, attitude of the people toward, 128-129, 156.
- Russia: prices of Russian bonds, 1913, 7; racial origin of, 9; outline of history of, 13-14; population, wealth, and debt of, 15-17; assets offsetting national debt of, 18; national debt charge compared with national income, 20; national debt charge compared with total government expenditure, 21; growth in population of, 22, 23; growth in wealth of, 25; increase in debt of, 27, 29; debt history of, 49-51; form of government in, 62; character of population of, 63; military position of, 64; economic position of, 65; foreign commerce of, 67, 68; position of, among nations, 73; prices of Russian bonds, 1873-1912, 77; cost of present war to, 76, 78; total losses of present war up to July 31, 1915, 79; war loans put out since beginning of present war up to October 23, 1915, 82, 83; war prices of Russian government bonds, 91, 92.
- St. Clair County, Missouri, default by, 154, 156, 299, 302.
- Santo Domingo, government loans in default, 59.
- Securities: American, held abroad, 69-70, 90; of colonial and foreign countries held by Great Britain, 65, 68-69, 70, 88-89, 90; foreign and colonial, held by France, 65, 70, 72, 88, 89, 90; foreign and colonial, held by Germany, 70; foreign, held in the United States, 70-71; supervision of railroad, 179-180; approval of public-service, 230-232; wisdom of commission control of the issue of public-service, 231-232; publicity method of control of issue of, 232.
- Service: regulation of, by state commissions, 215; three leading elements of, 215; safety of, 215-216; extent of, 216; joint use of facilities by public-service corporations, 216; character of, 216-217; other principles in regulation of, 217; regulation of, should be efficient and flexible, 217; interrelationship of, and rates, 217; cost of, as a basis for rates, 218-219.
- Sherman Anti-Trust Law: enactment of, 262-263; leading provisions of the, 263; enforcement of the, 263; early interpretation by the United States Supreme Court of the, 264-265; early interpretation a departure from common law, 264-265; later interpretation by the Supreme Court of the, in the Standard

- Oil and American Tobacco cases, 265-267; grounds of decisions in Standard Oil and Tobacco cases, 265-266; evidence on which decisions were based, 266; decisions in Standard Oil and Tobacco cases brought to a workable basis, 266-267; in regard to exports, 270.
- Short-term notes, 163.
- Short-term paper, 1.
- Shreveport rate cases, decisions in, 172.
- Sinking funds: national, of France, 31, 32; national, of Great Britain, 34, 35, 37, 38; national, of the United States, 44, 46; of Russia, 50; of Germany, 55; of Japan, 56; municipal, 151; industrial, 258.
- South Carolina, debt history of, 119-121.
- Special assessment bonds, 140.
- State bonds: description of, 94; purpose of issue of, 94, 129-131; collection of defaulted, 94; factors determining safety of, 94-95, 137; certification of, 131; vote of people to authorize, 131; length of time to run, 131; examples of general considerations governing safety of, 136-137; prices of, 1872-1912, 137-138; war prices of, 138-139; most important factor determining safety of, 139.
- States: early borrowing by our, x; debt statements of various, 95-97; percentage of net debt to assessed valuation for all, 98, 99; changes in total debts of all, 98-100, 101; debt histories of all defaulting, 100-128; constitutional restrictions on debt making of, 129-131; amount and increase of population by, 132-133; population by color by, 132, 134; literacy by, 135-136; regulation by, of issues of new railroad securities, 170.
- Statutory limitations in regard to creation and payment of local debt, 143-152.
- Stocks: as a channel of investment, 1; nature of, 2; classes of, 2.
- Supreme Court of the United States: on valuation as a basis for rates, 221-222, 223, 224, 226; on valuing land, 223; on pavement over mains, 224; on depreciation, 226; interpretation of the Sherman Anti-Trust Law by the, 264-267, 272; appeal to the, in enforcement of Clayton Act, 272; in enforcement of Federal Trade Commission Act, 273.
- Tax limits, 148.
- Telephone: origin and development of the, industry, 201-202; relation of, companies to the public, 237-238; report of Postmaster-General of the United States on telegraph and telephone lines, 237; ownership or regulation by Federal Government of, lines, 237-238.
- Tennessee, debt history of, 124-125.
- Terminal bonds, 163.
- Texas, debt history of, 111-112; favorable factors affecting credit of, 137.
- Tourist expenditures, 68, 69, 70, 88.
- Trade position of nations, 66-71.
- Trust legislation: Sherman Anti-Trust Law, 262-267; Clayton Anti-Trust Law, 267-272; Federal Trade Commission Law, 267-268, 272-282; existing anti-, 283.
- "Trust question": origin and development of the, 258-259; true solution of, 282.
- Turkey, government loans in default, 59.
- Uniform Utilities Bill, 233.
- Union Pacific Railway Company: cause of failure of, 167; relation between foreclosure price and debt, 187; summary of reorganization of, 187; what security-holders received in reorganization of, 189; market value of new securities received in reorganization of, 193.
- United States: early government borrowing in the, x; early state and local loans in the, x; development of the bond business in the, x; government bonds of the, 5; prices of bonds of the, 1913, 7; racial origin of the, 9; development of the, 10; population, wealth, and debt of the, 15-17; assets offsetting national debt of the, 17; national debt charge compared with national income, 19, 20; national debt charge compared with total government expenditure, 19, 21; growth in population of the, 22, 23; growth in wealth of the, 24, 25, 26; increase in national income of the, 26; increase in debt of the, 27, 29; debt history of the, 41-49; form of government in the, 58, 60; character of population of the, 63; military position of the, 64; economic position of the, 65; domestic commerce of the, 66; foreign commerce of

- the, 67, 68; payments by the, to settle foreign trade, 69; American securities held abroad, 69-70, 90; foreign investments of the, 70-71; position of the, among nations, 71; prices of bonds, 76, 77; war prices of bonds, 93.
- Uruguay, government loans in default, 59.
- Valuation: assessed, for all States, 1912-1913, 98, 99; relation between true value of property and assessed, 98; assessed, of counties and incorporated places, 141; assessed, and net debt of local communities, 141; federal, of railroads, 181-183; factors to be considered in federal, of railways, 181; not conclusive in making rates, 182; benefits to be derived from, of railroads according to Mr. Prouty, 182; summary of railway, 182-183; railroad, made by certain States, 183, 184; possible result of federal, 183; of public-service corporations as a basis for rates, 220-230; leading theories of, as a basis for rates, 220; original cost theory, 220; cost of reproduction theory, 220; cost of replacement theory, 220; best modern practice favors considering all elements in determining fair value as a basis for rates, 221-222; United States Supreme Court on, as a basis for rates, 221-222; methods of treatment of certain details of, 222-223; land, 223; United States Supreme Court on valuing land, 223; present vs. unit prices, 223-224; pavement over mains, 224; United States Supreme Court on pavement over mains, 224; treatment of depreciation, 224-226; United States Supreme Court on depreciation, 226; overhead charges, 226-227; development expense or going concern value, 227-228; goodwill, 227; franchise value, 228-229; summary of, as a basis for rates, 229-230.
- Value: fair, of property, 219, 220; allowance for overhead charges in estimating, 226-227; going concern, or development expense, 227-228; franchise, 228-229.
- Venezuela, government loans in default, 59.
- Virginia, debt history of, 114-117.
- Vote of people: to authorize state bonds, 131; to authorize county, municipal, and district bonds, 151.
- Voting trusts, 192.
- War: estimated direct cost of present war, 76-77, 78-79, 80-81; comparison with cost of previous wars, 80; total losses of present, to date, 79-80, 81; loans, 81-84; possible basis of peace, 84-85; necessity of reduced expenditures, 85-86; status of nations after the, 86-87.
- War prices: of government bonds, 91-93; state bonds, 138-139; municipal bonds, 160-161; railroad bonds, 196; public-service corporation bonds, 250; industrial bonds, 294.
- Water companies, 198.
- Water-power developments, relation of, to the public, 238.
- Wealth: estimated, of leading nations, 15-17; growth in, of leading nations, 23-26.
- West Virginia, debt history of, 117-118.
- Wisconsin: franchises in, 205; basis on which public-service consolidations are permitted in, 214; regulation of service by, Commission, 215; Commission on determining fair value as a basis for rates, 221; amount allowed by, Commission for overhead charges in estimating fair value, 227.

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